TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

'enton
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Volume 15—Number 12

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Use Inquiry Slips—Pages 4 and 68

EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

IORESCENT SCREW-IN LAMP has controls within 2 x 6-in. shade

ndescent work lights be converted to cool escent lights by ving Lite-Mite fluores- screw-in-bulb into ordinary lamp socket. ting work lights in , laboratory or office ain as originally in- ed allowing same flex- y plus 300-degree ro- n of bulb shade for efficient focusing. Unit con- two 4-w fluorescent lamps life rated at 7500 hours h provide cool white illumination of up to 500 foot- les at 3 to 5-in. working distance. Though normally lied for 115-v 60-cycle operation, ratings of 220-v r 60-cycle ac and 110-v dc can be obtained. Made **Stocker & Yale,** Association Bldg., Marblehead, Mass.

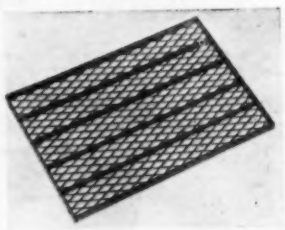
For more details circle **NED-8800** on enclosed inquiry slip

UICK-ACTING TOGGLE CLAMP is production work-holding fixture

Precision stamped from heavy-gage steel, model No. 235-U De-Sta-Co quick-acting toggle clamp features holding pressures up to 650 lb with smooth fast toggle action. Clamping bar moves into fully-retracted vertical ition when clamp is opened to allow maximum clear- e for speedy insertion and removal of work. Bear- holes are reamed and pivot pins are of long-wear- stainless steel. Tool measures 2¾ in. high and 10¼ long in closed position and 6¼ in. high in open posi- . Made by **Detroit Stamping Co.,** 435 Midland Ave., roit 3, Mich.

For more details circle **NED-8801** on enclosed inquiry slip

L-STEEL DOOR MAT offers improved cleaning action



t, dirt and mud are thor- ly removed from shoes by ar grating edges of all-steel door mat. Dirt s down into boxed-in e between grating and where it remains for pe- cal removal. Grating is rically welded to 1-in. -braced frame to form sturdy one-piece mat that sufficient weight to remain where placed. Mat meas- 16½ x 24 in., but each side is drilled with two holes at individual mats can be bolted together to form iple unit for large areas of various shapes and di- ions. Mat lists for $6.95. Made by **Ballymore Co.,** ne 3, Pa.

For more details circle **NED-8802** on enclosed inquiry slip

YOU KNOW? Fully self-centering action is af- d by Lorig rolls which adapt themselves as conveyor rolls for conveyor belts or for self-centering of power Roll is slightly crowned and cut transversely. Two s are fixed to rotate as unit, and working sur- are approximately horizontal while the axes are at gle. Planes or lines of force in both halves twist y toward center in direction of movement. Thus, entering action is conferred on any materials pass- ver rolls. Developed by United States Steel Corp., roadway, New York 6, N. Y.

For more details circle **NED-8803** on enclosed inquiry slip

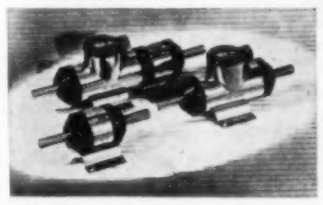
FINNED ELECTRIC HEATERS assembled for air duct mounting

Electric heating of large volumes of air for comfort or processing is effected by Chromalox Finstrip air blast heaters. Units are assembled in banks to form sections of various sizes and then welded in frame for mounting in air ducts. Sheaths and fins are fabricated of Monel to protect them against corrosion caused by moisture in air passing through ducts. Provisions for thermal cutout and thermostatic control can be made in construction.

Illustrated heater is rated 440 v 192 kw and is composed of four separate removable quadrants of 84 kw, each with operating flexibility provided by eight circuits for stepped modulation. Unit can be wired for infinite control to as low as 10 per cent of full rated capacity. Made by **Edwin L. Wiegand Co.,** 7509 Thomas Blvd., Pittsburgh 8, Pa.

For more details circle **NED-8804** on enclosed inquiry slip

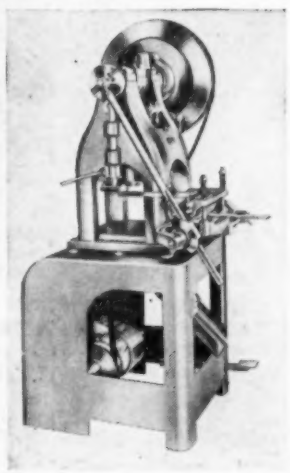
COMBINATION DRIVE UNITS give both reduced and variable speeds



These combination drive units consist of integral arrangements of standard miniature variable and fixed ratio drives and are supplied as small completely sealed packaged items. Capable of delivering 2 lb-in. torque, they are recommended for such applications as timers, recorders, controllers, computers and indicating mechanisms. By combining variable ratio unit with proper fixed ratio, variable output speed is obtained at any desired nominal speed and is infinitely adjustable in ratio from 1/6 to 6. For example, 1800-rpm motor coupled to combination unit having four-section 531,441 to 1 reduction gear unit will give variable output speed of 0.6 to 20 revolutions per day. Or if single section 2 to 1 reduction gear unit is used, all output speeds between 150 and 5400 rpm are available. Made by **Metron Instrument Co.,** 436 Lincoln St., Denver 9, Colo.

For more details circle **NED-8805** on enclosed inquiry slip

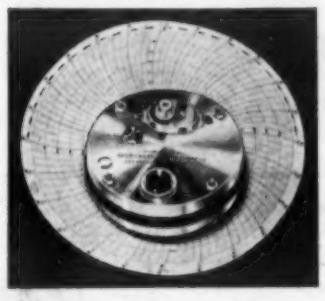
HIGH SPEED PRESS is automatic in operation



Rated 8 tons, this Hi-Speed Diebel automatic press is designed for production work. Use of adjustable speed drive permits selection of any operating speed from 110 to 350 strokes per minute. Press can be supplied with automatic roll feed in front only or in both front and rear positions. Feed rollers can be furnished hardened and ground, rubber coated or knurled. Maximum die set capacity is 6 x 8 in. with 6-in. shut height. Standard stroke is 1 or 1½ in., and ram adjustment is 1 in. Standard equipment includes bronze bearings throughout, automatic brake release for continuous operation, clutch for single stroke operation, knockout in ram, two stock guides, two belts and wrenches. Made by **Di Machine Corp.,** 2701 W. Irving Park Rd., Chicago 18, Ill.

For more details circle **NED-8806** on enclosed inquiry slip

RECORDING CHART CLOCK permits 8-day continuous readings



Readily adaptable for use in all instruments which employ round recording chart, Arcco-Macnick chart clock makes possible continuous readings over period of eight days with single winding. Clock is hermetically sealed in thin case to protect jeweled mechanism against moisture, dust, corrosive gases and abuse. Pinions are machine cut and splined to their shafts. Ample power is afforded by heavy main spring. Ten rotation speeds are possible and chart hub arbor turns 1 revolution in 24 hours. Interchangeable converter gears are available to obtain one turn of the chart in 2, 3, 4, 6, 8, 12 or 24 hours or in 2, 3 or 7 days. Made by **American Recording Chart Co.,** 3109 E. Eleventh St., Los Angeles 23, Calif.

For more details circle **NED-8807** on enclosed inquiry slip

AIR-POWERED ROD SHEAR handles up to ⅝-in. rod diameters

Operating on standard shop air pressure, Di-Acro Power Parter will cut metal rods and bars accurately without distorting their roundness or crushing material. Ten holes in cutting head provide for $\frac{1}{16}$ to ⅝-in. stock size range in increments of $\frac{1}{16}$-in. Special cutting heads for square, rectangular, hexagon, special size round and other shaped bars can be supplied. Machine is equipped with air cylinder cushioned at both ends for quiet operation, and each cutting cycle is obtained instantly through four-way foot valve, leaving both hands of operator free to handle material. Ejectomatic gage allows gaging, parting and ejecting to be obtained in single working cycle. Hardened and ground alloy tool steel cutting heads are reversible and can be removed easily for resharpening. Three-way adjustable standard gage facilitates positioning. Made by **O'Neil-Irwin Mfg. Co.,** 354 Eighth Ave., Lake City, Minn.

For more details circle **NED-8808** on enclosed inquiry slip

STAPLING HAMMER speeds construction in cold weather

Application of roofing, siding, freight car lining and similar materials is facilitated by use of H4 heavy-duty stapling hammer. Self-feeding tool drives home ¾-in. galvanized staple with one follow-through blow. One-hand operation frees other hand to hold material in place, and gloves can be worn on both hands. Staple legs diverge inside work, putting them under tension and increasing their holding power. Tool weighs 2¼ lb with full load of 50 staples. Made by **Bostitch Inc.,** 927 Mechanic St., Westerly, R. I.

For more details circle **NED-8809** on enclosed inquiry slip

A *New* VALVAIR..

with HIGH TENSILE

DIE-CAST BODY

AT AN

Attractive Price!

Two-way knob-operated Valvair air control valve with the new type die-cast body.

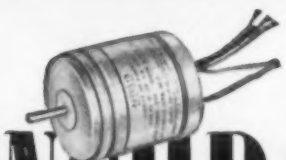
Preserving all the well-liked advantages of Valvair design: "O-U" type packer, parts interchangeable and replaceable, no metal seats, standard pipe area throughout valve, etc. For air, water and oil applications up to 175 p.s.i. and temperatures to 125° F. Sizes ¼" and ⅜" only in knob-operated model only, 2-way and 3-way (open end exhaust).

Write for prices and Bulletin "N".

VALVAIR CORPORATION • 454 Morgan Avenue, Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair — 2-WAY — 3-WAY — 4-WAY

▲ For more details circle NED-8810 on enclosed inquiry slip ▲



SYNCHROS

PRECISION-BUILT BY

ECLIPSE-PIONEER

GUARANTEED ACCURACY TO WITHIN 15 MINUTES ON ALL PRODUCTION UNITS

For more than 17 years Eclipse-Pioneer has been a leader in the development of high precision synchros for aircraft, marine and industrial applications. Today, thanks to this long experience and specialization, Eclipse-Pioneer Autosyn* Synchros give you a *guaranteed* accuracy of 15 minutes (maximum) on all individual AY 200 type 400 cycle transmitters, differential generators, control transformers and resolvers. Furthermore, this phenomenal accuracy applies to *all production units* in this series. Where special applications are involved, Eclipse-Pioneer will supply Autosyn Synchros with an even *finer* degree of accuracy. And remember, when you buy from Eclipse-Pioneer, this high precision is yours at the lowest possible cost.

*REG. TRADE MARK BENDIX AVIATION CORPORATION

LOOK FOR THE PIONEER MARK OF QUALITY REG. U. S. PAT. OFF.

Typical Performance Characteristics for one AY-201-3 Autosyn Synchro when transmitting to:

	One Control Transformer	Two Control Transformers	Three Control Transformers
INPUT			
Voltage	26-volts, single-phase	26-volts, single-phase	26-volts, single-phase
Frequency	400 cycles per second	400 cycles per second	400 cycles per second
Current	105 milliamperes	130 milliamperes	155 milliamperes
Power	0.90 watts	1.4 watts	1.9 watts
Impedance	85+j240 ohms	80+j180 ohms	77+j149 ohms
OUTPUT			
Voltage max. (rotor output)	18.0 volts	15.5 volts	13.3 volts
Voltage at null	30 millivolts	20 millivolts	20 millivolts
Sensitivity	315 millivolts/degree	270 millivolts/degree	230 millivolts/degree
Voltage phase shift	18.5 degrees	24.5 degrees	28.0 degrees
System accuracy (max. possible spread)	0.5 degrees	0.5 degrees	0.5 degrees

Other E-P precision components for servo mechanism and computing equipment:

Servo motors and systems • rate generators • gyros • stabilization equipment • turbine power supplies • remote indicating-transmitting systems and special purpose electron tubes.

For detailed information, write to Dept. F

ECLIPSE-PIONEER DIVISION of Bendix AVIATION CORPORATION
TETERBORO, NEW JERSEY

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

▲ For more details circle NED-8811 on enclosed inquiry slip ▲

At Year's End

In the Spirit of the Season, we of the editorial, advertising, promotion, reader service and circulation departments extend to you our best wishes for a very Merry Christmas and a prosperous Happy New Year. We have enjoyed serving you, and hope that we may continue to do so.

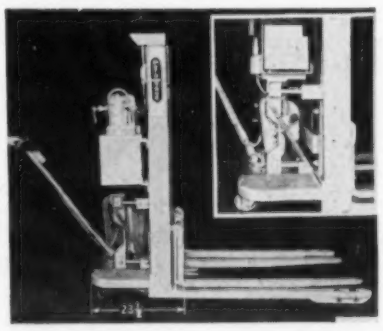
A. N. Gregg
EDITOR

THREAD RESTORER
works well in close quarters

Closely spaced studs and bolts that are distorted, battered or rusted can be reconditioned with this thread restorer. Adjustable cutting jaws can be fitted by simple twist of handle to any male thread of ¼ to 1-in. root diameter, either right or left hand. Jaws can be engaged at bottom of threaded section and turned toward top, leaving clean end threads which accept standard nuts. Having swing of only 2-5/16 in., tool is especially suited for use on engine cylinder heads, wheel lugs, spring hangers, shafts and pipe. Compact self-contained tool weighs 1¼ lb. Made by **Buckingham Mfg. Co.**, 20 Travis Ave., Binghamton, N. Y.

▲ For more details circle NED-8812 on enclosed inquiry slip ▲

MOTORIZED HAND TRUCK
has battery mounted above drive unit

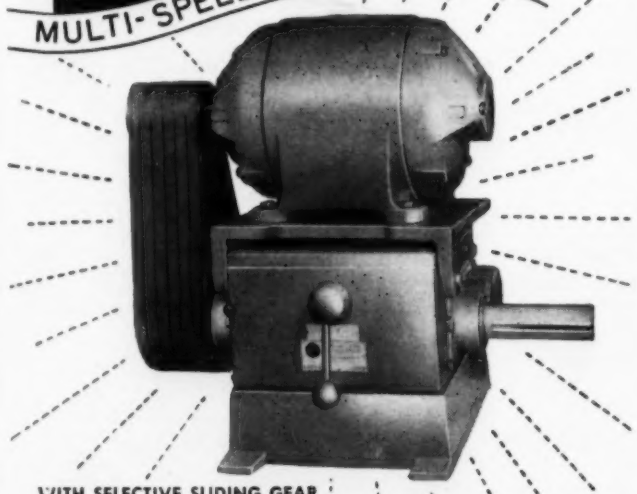


By mounting battery above motor drive unit, Shortie Hi-Lift pallet and skid handling truck has been made 10 in. shorter than preceding models to improve maneuverability and to facilitate stacking materials in narrow aisles. Standard capacities are 3000 and 4000 lb for fork lengths from 36 to 48 in. Lifting heights are 80, 94, 100, 110 and 120 in. with corresponding collapsed heights of 67, 67, 71, 76 and 81 in. Lifting speeds with 2000-lb load are 12 fpm for 12-v motor drive and 20 fpm for 18-v drive. Features include hinged articulating action for smooth running over uneven floors, two coil springs to hold drive wheel on floor and swivel casters on front of truck to provide stability. Made by **Moto-Truc Co.**, 1951 E. 59th St., Cleveland 3, O.

▲ For more details circle NED-8813 on enclosed inquiry slip ▲

TURNER

MULTI-SPEED POWER UNIT....



WITH SELECTIVE SLIDING GEAR TRANSMISSIONS IN 3, 4, 6 and 9 SPEEDS . . . .

The TURNER UNI-DRIVE CO. is the leader in the motorizing of cone drive type machine tools. This illustrated multi-drive power unit is a case in point. It is a sturdy, dependable answer to the problems of power drives involving speed reduction with multiple speeds. A flick of the wrist is all that's necessary to shift to any pre-determined speed. This machine can also be assembled with different gear ratios to meet specific requirements.

TURNER UNI-DRIVE CO.

3420 Terrace St., Kansas City 8, Mo.

▲ For more details circle NED-8814 on enclosed inquiry slip ▲

Specify dy/chek
dye penetrant metal inspection

Simplified Non-Destructive Testing...
Any Metal—Anywhere

FASTER, CHEAPER, MORE ACCURATE
Completely Portable, License-Free

Write for Details

dy/chek COMPANY

Division of Northrop Aircraft, Inc.

1531 EAST BROADWAY HAWTHORNE, CALIF.

▲ For more details circle NED-8815 on enclosed inquiry slip ▲

BEST BUY BROWNING

FOR BETTER DRIVES

BROWNING
Gripbelt Sheaves With Split Taper Bushings

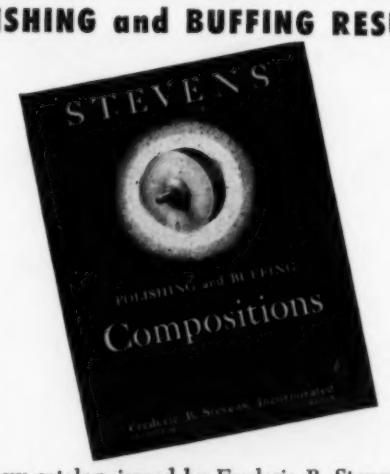
Write for the name of the BROWNING distributor near you.

BROWNING MANUFACTURING COMPANY
INCORPORATED
MAYSVILLE, KENTUCKY

BEST BUY BROWNING

▲ For more details circle NED-8816 on enclosed inquiry slip ▲

FREE— A GUIDE TO BETTER POLISHING and BUFFING RESULTS



This new catalog, issued by Frederic B. Stevens, Inc., is now available to metal finishers. It is a 12-page booklet and describes the many Stevens job-tested compositions for buffing and polishing. In addition the catalog outlines Stevens' customer services which include operation of a pilot plant for analyzing buffing and polishing operating problems. The catalog also includes charts showing the recommended type of composition for all surfaces and every operation. Copies of the Stevens composition catalog may be obtained from Stevens or Udylite representatives or by writing direct to Frederic B. Stevens, Inc., Detroit 16, Michigan.

▲ For more details circle NED-8817 on enclosed inquiry slip ▲

CRAMPED FOR ROOM ?

Save Valuable Floor Space with A-B-C Short Case Sealer

Seals top and bottom flaps of shipping containers . . . speedily, inexpensively, efficiently, AND IN FAR LESS ROOM.

A model for every job . . . both automatic and semi-automatic.

Write for Details and Floor Plans.

Better production-proven machines far faster, lower cost packaging.
(Case Sealers, Unloaders and Unscramblers, Side Sealers, Hand Gluers, Seal-All)

A-B-C PACKAGING MACHINE CORP.
QUINCY, ILLINOIS

For more details circle NED-8818 on enclosed inquiry slip

PRACTICAL, SIMPLE MACHINES

for washing and cleaning oily, greasy, etc. Parts.

Pats. Pending

FULLY AUTOMATIC
No pumps, sprays or hand work.

Automatic machines developed from the old, proved "hand-dunking" method (used for years) into practical units, with an added ACTIVE soak and ACTIVE wash action.

Use COLD or HOT solutions.

Sizes to meet your requirement.

Please write for details.

THE SUPER-SOAK COMPANY
1441-3 South 65th Street West Allis, Wisc.

For more details circle NED-8819 on enclosed inquiry slip

SMALL
PARTS
Cost less when made by
MULTI-SWAGE
The economy way to get a million small parts similar to these—

Examine the tubular metal parts shown here twice size. If you use anything similar . . . in large quantities . . . important savings can be yours. Send us the part and specs. Our quotation will show why the Bead Chain Company's MULTI-SWAGE Process has long been known as the most economical method of making electronic contact pins, terminals, jacks and sleeves. And, why more and more users of mechanical parts (up to ¼" dia. and to 2" length) employ our facilities. WRITE for Data Bulletin.

Trade Mark

THE BEAD CHAIN MANUFACTURING CO.
16 Mountain Grove St., Bridgeport 5, Conn.
Manufacturers of the Kinkless Chain of a thousand Uses

For more details circle NED-8820 on enclosed inquiry slip

ELECTRIC ROTARY ACTUATORS feature load-limiting switches

Adaptable to valve operation and similar applications, ROTORette models R-430 and R-440 are load-sensitive units which can be adjusted to any torque up to 50-lb-in. Motion between travel limits is controlled by adjustable positive stops which cause reaction on limit switches. Provision is made on model R-440 for position-indicating potentiometer or intermediate position switches where either feature is desired. Both units weigh approximately 1 lb and are designed to meet AN-M-40 requirements. Made by **Airborne Accessories Corp.**, 25A Montgomery St., Hillside 5, N. J.

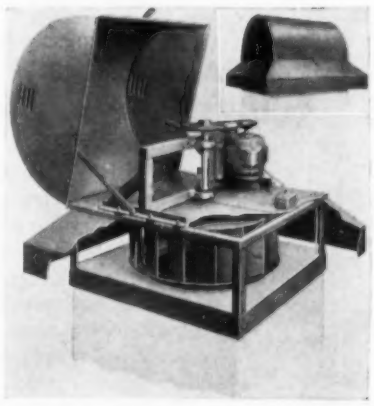
For more details circle NED-8821 on enclosed inquiry slip

SPARE-PART BOXES made to government specifications

Applicable for storing electrical or mechanical parts, these sturdy sheet steel spare-part boxes can be furnished to any government specifications. Assemblage includes all-welded construction with steel fittings and hardware. Company offers complete facilities for manufacture of such boxes for all branches of the armed services. Made by **Stackbin Corp.**, 1081 Main St., Pawtucket, R. I.

For more details circle NED-8822 on enclosed inquiry slip

ROOF VENTILATOR operates at low noise level



Especially suitable for use where powered duct exhaust ventilators operating at low noise levels are desirable, Airlift roof ventilator power unit features centrifugal type fan with backwardly curved blades mounted within weatherproof chamber. Streamlined fan bottom increases efficiency while reducing turbulence to minimum and permits reduced operating speeds. Welded steel framework provides sturdy support for unit which fits over curb built to extend duct rising from building roof. Ventilator can be obtained in 14 sizes providing nearly 50 capacity variations. Made by **Swartwout Co.**, 18519 Euclid Ave., Cleveland 12, O.

For more details circle NED-8823 on enclosed inquiry slip

HERE'S HELP FOR THE PLASTICS USER

▶ If you are looking for new ways and means to improve your product, and save money too, you'll want this new Taylor Catalog on Vulcanized Fibre, Phenol Fibre and Special Laminates. 48 fact-filled pages tell you how to design, plan and buy for maximum economy . . . show you how to machine Taylor materials . . . give you weights, specifications and properties. That's not all! A handy, easy-to-read selection chart makes picking the right material for your job a cinch! While you think of it, send for your free copy NOW. Just ask for Catalog 50 ND.

Taylor
TAYLOR FIBRE CO.
NORRISTOWN, PENNSYLVANIA
LA VERNE, CALIFORNIA

For more details circle NED-8824 on enclosed inquiry slip

"DON'T PLAY AROUND"
When it's a job for the Gee-Vee-Line ALUMINUM SKATE WHEEL CONVEYOR

PORTABLE!
10-FOOT SECTION WEIGHS ONLY
26 POUNDS

Note the IMPROVED assembly hooks!

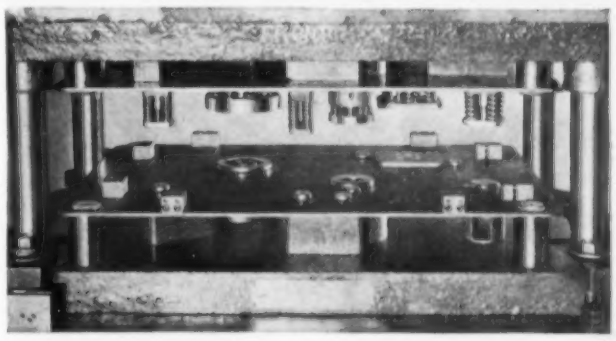
Write for Low Prices and Catalog Today.

EXTRA STRONG ALUMINUM CONSTRUCTION

Handles units up to 150 pounds with ease. For heavier work—steel conveyors available.

HASLETT CHUTE AND CONVEYOR CO., OAKS 3, PA.

For more details circle NED-8825 on enclosed inquiry slip



● Magnetic Perforating Die set-up in small inclinable punch press.

Magnetic PERFORATING DIES

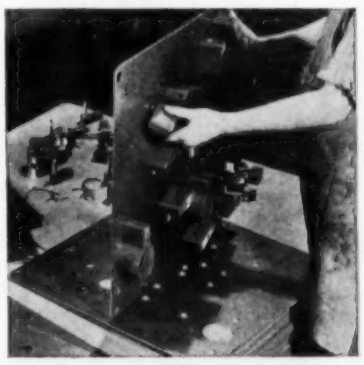
NEW and FAST Method for perforating Sheet Metal

SAVE PRESS DOWN TIME. Approximately 15 minutes required to change from punching one subject of say 20 holes to a different 20 hole arrangement. Whistler Magnetic Perforating Dies *increase* press production.

HOLD CLOSE TOLERANCES. Hole centers may be held to .0005" accuracy or as close as can be jig bored.

GREATER PUNCH AND DIE LIFE. Concentricity of punch and die assured thus giving uniform clearance around punch, increasing punch and die life.

SAVE FLOOR SPACE. Die storage cut to a minimum because only the 2 locating templets are stored...all that is required to duplicate the set-up.



● Die retainers complete with bushings being inserted in die templet.

REDUCE DIE COSTS. Whistler Magnetic Perforating Punch and Die units are used repeatedly for different hole arrangements. When completing one job, remove all units from templet and put them into service on the next different set-up. Combine any number of hole sizes and shapes. Punch and die costs are amortized over continued re-use in many jobs.

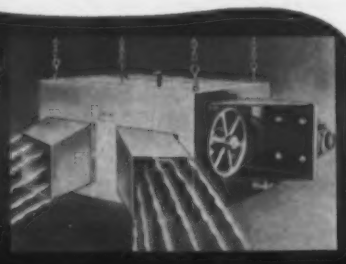
Write for Catalog . . . Whistler Magnetic Perforating Punches and Dies have *proven* their cost-cutting advantages in many prominent plants. The catalog shows how. Send for it today.

S. B. WHISTLER & SONS, Inc.
750 MILITARY ROAD, BUFFALO 17, N. Y.

Also manufacturers of a complete line of drawing, forming, blanking and progressive dies to special requirements.

For more details circle NED-8826 on enclosed inquiry slip

HERE'S YOUR ANSWER TO LARGE AREA SPACE HEATING!



CHROMALOX *Blower Type* UNIT HEATERS

FOR HEAVY-DUTY HEATING IN FACTORIES, WAREHOUSES, OFFICES

Ceiling mounted CHROMALOX Electric Blower-Type Heaters are your quick, easy answer to space heating! Twin centrifugal fans, driven by a 3-phase motor, distribute warmth evenly over large areas. Air ducts can be used to convey heated air to desired locations. Automatic thermal cutout assures protection against overheating. 51,180 to 136,480 BTU output per hour.

HAVE A HEATING PROBLEM OF ANY KIND?

Then write for Catalog 50. It's loaded with information on many of the 15,000 types, sizes and ratings of Chromalox Heating Units and Equipment.

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

See other advertisement on page 59

CHROMALOX 18-8

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-8827 on enclosed inquiry slip

"They don't need an anchor—just a piece of slip-resistant 4-WAY Safety Plate."

For greater safety under foot, in your plant and on your products

Inland 4-Way® Safety Plate

Adds Strength

Easy to Fabricate

Safe Footing

Easy to Clean

STOCKED BY LEADING STEEL WAREHOUSES

INLAND

INLAND STEEL COMPANY, Dept. NED120
38 So. Dearborn St., Chicago 3, Ill.

Sales Offices: Chicago, Davenport, Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis and St. Paul.

New Bulletin with New Ideas — Just Out! Bulletin FI. Complete engineering and application data. Send for it!

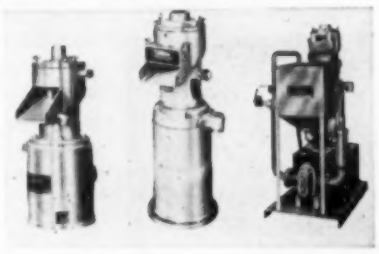
For more details circle NED-8828 on enclosed inquiry slip

THIN-WALL HEX SOCKETS can be used in restricted quarters

Twenty sizes of Proto single-hexagon thin-wall sockets can be used with wrenches for hand or power use. Six-point units safely fit and turn undersize nuts as well as those that are rusted or damaged. Made of alloy steel with chrome finish, they will not slip or chew up brass and other soft metals. Seven sizes are ⅜-in. drive regular sockets with openings of 5/16 to 11/16-in. Six are ⅜-in. drive extra-deep sockets with ⅜ to 11/16-in. openings. Seven are ½-in. drive regular sockets with ⅜ to ¾-in. openings. Made by **Plomb Tool Co.,** Dept. D, 2209 Santa Fe Ave., Los Angeles 54, Calif.

For more details circle NED-8829 on enclosed inquiry slip

HIGH-SPEED MILLS process greases and lubricants



Wide variety of greases, including metallic-soap base and other solid additive types, can be processed by these Speedline mills. Good dispersion in smooth-type greases with improved texture and appearance is obtained. Model MG mill, designed for laboratory testing and control and custom runs, weighs only 145 lb. Model B-1405 unit has capacity as high as 8000 lb per hour and can be obtained with or without deaerator unit for eliminating entrained air. Mills are available in both cast-iron and stainless steel. All parts are easily cleaned and can be interchanged readily. Mills can be supplied to meet wide variety of electrical requirements. Made by **Morehouse Industries,** Dept. M, 1156 San Fernando Rd., Los Angeles 65, Calif.

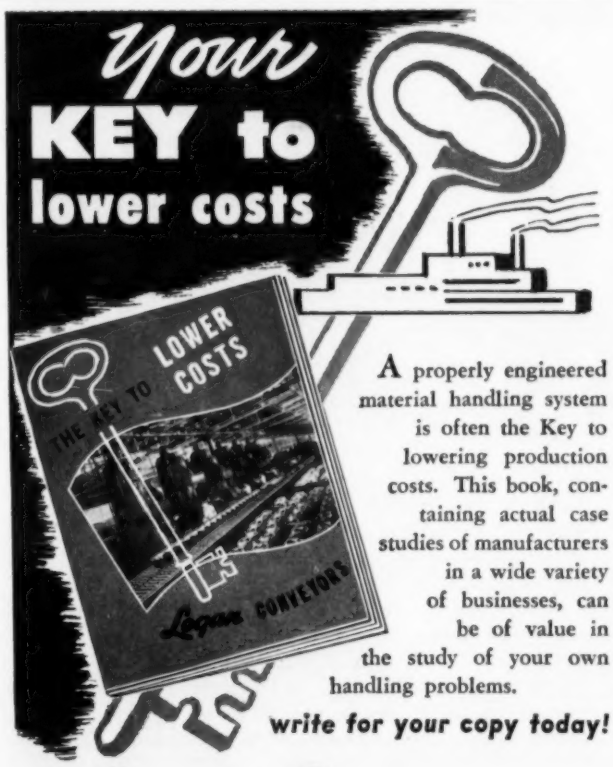
For more details circle NED-8830 on enclosed inquiry slip

ION EXCHANGE DEMINERALIZER delivers up to 10 gph of pure water

Attachable to any wall near water tap, this permanent cartridge demineralizer is equipped with flow meter and sight indicator that enables operator to adjust flow intake to proper rate for efficient results. Operating on ion exchange principle, it transforms tap water into demineralized water of high purity. Permanent cartridge is used which requires only replacement of exhausted resins with fresh charge when resin needs replacing. Electric conductivity meter built into unit provides continuous visual indication of quality of treated water being produced and warns when resin charge should be renewed. Made by **Penfield Mfg. Co.,** 19M High School Ave., Meriden, Conn.

For more details circle NED-8831 on enclosed inquiry slip

Your KEY to lower costs



A properly engineered material handling system is often the Key to lowering production costs. This book, containing actual case studies of manufacturers in a wide variety of businesses, can be of value in the study of your own handling problems.

write for your copy today!

Logan Conveyors

LOGAN CO., 215 CABEL ST. • LOUISVILLE 6, KY.

For more details circle NED-8832 on enclosed inquiry slip

Low Cost...

GUARANTEED VACUUM, 25 MICRONS

High Vacuum

Whether your high vacuum requirement be filtration—distillation—transference of liquids—evaporation, the New Cenco-Pressovac Pump is fast, economical and serviceable. Try it for effective high vacuum with high pumping speed and quiet operation. Furnished with reliable motors for various line currents and voltages.

Write Dept. C 29, Central Scientific Company, 1700 Irving Park Road, Chicago 13, Ill., for vacuum engineering bulletin 10.

CENCO

CENTRAL SCIENTIFIC COMPANY

Scientific Instruments • Laboratory Supplies

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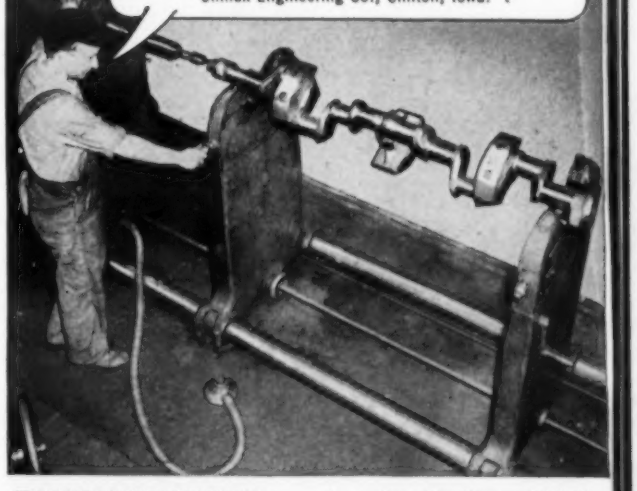
San Francisco • Santa Clara • Toronto • Montreal • Vancouver

For more details circle NED-8833 on enclosed inquiry slip

"MOTORS RUN SMOOTHER when CRANKSHAFTS are *DY-NAMICALLY BALANCED!*"

—says Harold R. Etnyre, who has operated this "Bear" Dy-Namic Balancing Machine for the past 5 years at Climax Engineering Co., Clinton, Iowa.



IT'S TIME TO INVESTIGATE if you are not using the PROVEN Dy-Namic Balancing technique in your plant! Improves product performance by reducing noise, vibration and friction —*fast...accurate...economical!* FREE Dy-Namic Balancing Manual brings you latest facts!

Bear Mfg. Co., Dept. N-5, Rock Island, Ill. 4083

"BEAR" STATIC AND *DY-NAMIC BALANCING* MACHINES

For more details circle NED-8834 on enclosed inquiry slip

For WAR or for PEACE

A good source for Cast Brass Parts and Assemblies

Central facilities include——

BRASS FOUNDRY—TOOL & PATTERN SHOP—TURRET LATHES—AUTOMATIC CHUCKERS—DRILL PRESSES and MILLING—POLISHING—PLATING—ASSEMBLING

THE CENTRAL BRASS MFG. CO.
2950 E. 55th St. Cleveland, Ohio

For more details circle NED-8835 on enclosed inquiry slip

with R•B* Interchangeable PUNCHES and DIES

R-B punches and dies cut die-making costs because they permit use of standardized R-B retainers which are quickly and accurately mounted. Completely interchangeable, R-B punches and dies consequently reduce large inventories.

Quickly and easily installed, yet accurately located and securely locked both vertically and radially, R-B punches and dies reduce press "down time" too, because they enable operators to make quick changes.

R-B standard punches and dies are stocked for immediate delivery. Punches and dies of special sizes, shapes and materials are made promptly to your specifications. *Richard Brothers

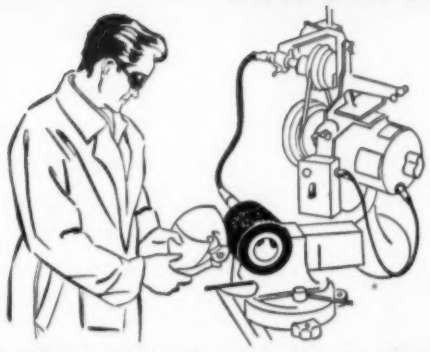
Get the whole story in this 48-page free catalog →

ALLIED PRODUCTS CORPORATION
RICHARD BROTHERS DIVISION
Department 50 • 12629 Burt Road • Detroit 23, Mich.

Also Produced in Allied's Four Plants . . . HARDENED AND PRECISION GROUND PARTS • STANDARD CAP SCREWS • SPECIAL COLD FORGED PARTS • SHEET METAL DIES • ALLITE DIES CAST OF ZINC ALLOY • JIGS • FIXTURES •

For more details circle NED-8836 on enclosed inquiry slip

NEW, IMPROVED **NU-MATIC**



THE WHEEL WITH THE PNEUMATIC DRUM

With this Nu-Matic wheel the abrasive belt rides on a cushion of air contained in a rubber drum. Different pressures in the drum and different grits provide varied surface finishes. Deflate, and belts can be changed easily and quickly for grinding, sanding or polishing. Cut your labor, production and inventory costs with Nu-Matic grinding units. Adapters for ⅝" 11 or ½"-13 power equipment. (Specify size.)

Adaptable to bench, portable or flexible shaft power.

NU-MATIC GRINDERS, INC., 10304 W. McNICHOLS RD.
Detroit 21, Michigan UNiversity 3-2573

For more details circle NED-8837 on enclosed inquiry slip

HONEYWELL MERCURY SWITCH PRICES ARE DOWN!

ACTUAL SIZE

#AS408D0, 1 amp., SPST 1 7/16" x 11/32" . . . $0.125

ACTUAL SIZE

#AS408D1, 1 amp., SPST 1 7/16" x 11/32" . . . $0.175

Prices are net to manufacturers for quantities of 100 and up. Type number ending in "0" is without leads . . . number ending in "1" includes 7-inch, double cotton covered, extra flexible leads.

Write for complete engineering specifications . . . or for immediate action, call the Honeywell branch office nearest you.

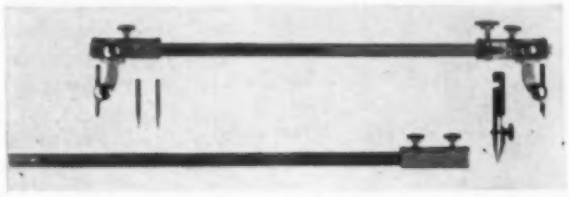
MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4529 Wayne Ave., Philadelphia 44, Pa. Offices in more than 80 principal cities of the United States, Canada and throughout the world.

Honeywell MERCURY SWITCHES

For more details circle NED-8838 on enclosed inquiry slip

BEAM COMPASS for large-scale precision drafting

Designed for heavy duty drafting and layout service, Vemco-Velox beam compass incorporates 4-in. rack and pinion type micrometric adjustment. It is made of hard-



rolled aluminum alloy and is supplied in lengths for radii of 8¼ or 12 in. Beam can be coupled to Vemco beam extensions or to stock bars of aluminum, brass or steel for radii up to 6 ft. Spring in lock of sliding legs insures smooth action. Lock holds legs securely in place. Compass is adaptable for all-pencil drafting, precision inking, scribing on tool steel and layout on other metals. Both legs receive pencil leads, center points or needle points. Pencil parts are detachable so that either member will hold pen attachment. Made by **V. & E. Mfg. Co.**, P. O. Box 950-M, 758 S. Fair Oaks Ave., Pasadena 20, Calif.

For more details circle NED-8839 on enclosed inquiry slip

INDUSTRIAL POWER TRUCK hinged platform reduces length

Designed especially for applications where floor or elevator size and capacity are limited, this electric power truck measures 109 in. long overall with platform in load-carrying position and 84 in. with forward end of hinged platform raised. Load-carrying capacity is 4000 lb and weight of truck is 3670 lb. Since center of gravity of load is generally over forward chassis and wheels, counter-balancing is not required. Outer half of apron-type platform rests on forward part of platform underframe. Two platform sections are joined by specially-designed hinges which assure positive alignment and security for truck and load. Extreme width of truck is 38 in., height of head frame is 83 in., and maximum elevation is 59 in. Platform in lowered position is 7 in. above floor. Made by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 14, O.

For more details circle NED-8840 on enclosed inquiry slip

DO YOU KNOW? Dense, strong, uniform concrete blocks result from addition of small amounts of Santomerse S wetting agent to the mix. Plasticity required for proper molding is improved by this surface active agent. Additional advantages reported include easily cleaned equipment, light colored products and good dispersion of cement. About 8 oz of this chemical are added to a five-bag cement mixture. Santomerse S is made by Monsanto Chemical Co., 1700 S. Second St., St. Louis 4, Mo.

For more details circle NED-8841 on enclosed inquiry slip

Announcing...

The NEW Struthers Wells IMPREGNATOR

For DEPENDABLE IMPREGNATION OF ELECTRIC COILS — WOOD CARBON PARTS — AND OTHER MATERIALS

The new Struthers Wells Impregnator for dependable, simplified impregnation of a wide variety of materials, is available in a complete line of sizes for vacuum and pressure operations—for use by heating with steam, electricity or Dowtherm, or for non-heated operations. Supplied in complete units as illustrated, or principal parts only may be specified if desired. • Heating systems are supplied if required.

Write today for Bulletin B-30

STRUTHERS WELLS CORPORATION
WARREN, PA.
Plants at WARREN, PA. and TITUSVILLE, PA.
OFFICES IN PRINCIPAL CITIES

For more details circle NED-8842 on enclosed inquiry slip

Oil Resistant Rubber Parts

• Featuring LONG LIFE and MINIMUM SWELL, gaskets, sleeves, washers, tubing, and extruded cross-sections now are available fabricated from new oil and gasoline—resistant rubber compounds. These compounds have been developed especially to resist the chemical action of petroleum products and their derivatives as well as industrial and commercial lubricants.

The new compounds can be fabricated into precision parts intended for such applications as fuel lines, dust covers, filters, vibration dampeners, etc.

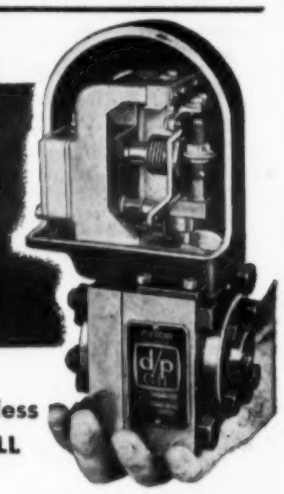
STALWART Custom-Fabricated oil and gasoline—resistant rubber parts can be supplied to meet S.A.E. or individual specifications in the automotive, aviation, petroleum, electrical, chemical processing and many other industries.

WRITE FOR CATALOG

THE STALWART RUBBER CO.
12151 NORTHFIELD RD., BEDFORD, OHIO
CUSTOM RUBBER FABRICATORS

For more details circle NED-8843 on enclosed inquiry slip

SIMPLER FLOW MEASUREMENT in the palm of your hand



Compact, Accurate, Mercury-less DIFFERENTIAL PRESSURE CELL

Simplify troublesome flow problems . . . especially where corrosion is a factor or the use of mercury is objectionable. This unique flow measuring device operating on force-balance principle, transmits flow measurement to remote, conveniently-located receiver, either indicating, recording or controlling.

OUTSTANDING FEATURES

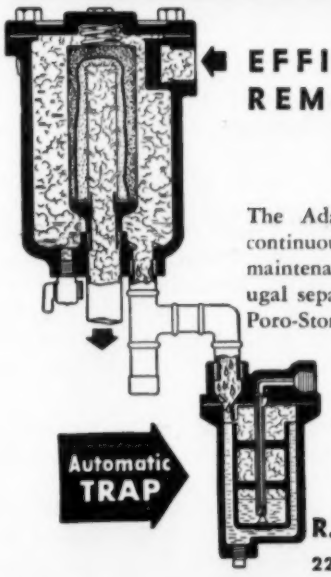
- *Uses no mercury*
- *No. 316 Stainless Steel Construction*
- *Easy installation*
- *Essentially Zero Displacement*
- *Weighs only 20 pounds*

WRITE FOR BULLETIN 420. The Foxboro Company, 134 Neponset Avenue, Foxboro, Mass., U.S.A.

FOXBORO Reg. U. S. Pat. Off. ACCURATE FLOW MEASUREMENT

For more details circle NED-8844 on enclosed inquiry slip

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:

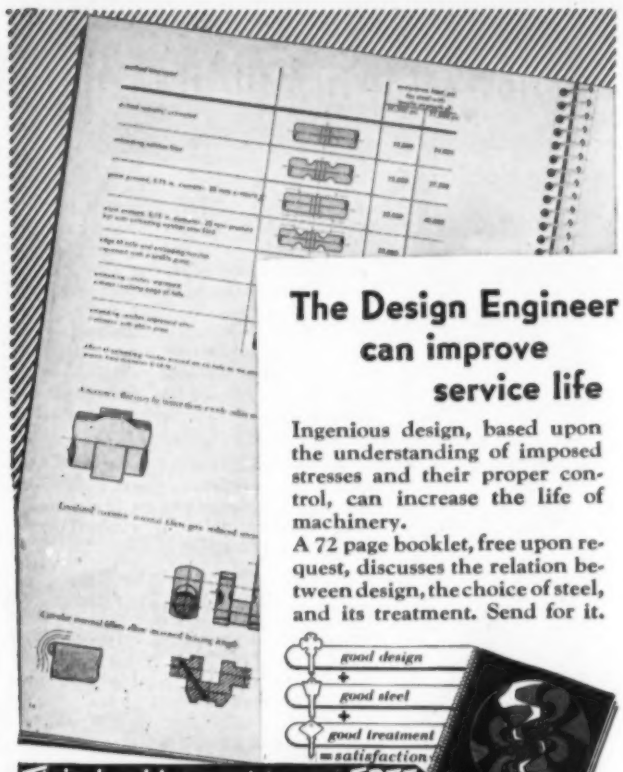
OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

For more details circle NED-8845 on enclosed inquiry slip



▲ For more details circle **NED-8854** on enclosed inquiry slip ▲

Another Bristol First!

Accurate Mechanical Recording and Controlling of Absolute Pressure

IN RANGES AS LOW AS 0 TO 6 MM.!

Now you can get a direct reading of pressure above zero absolute, inherently corrected for barometric variations, with far greater accuracy than ever before.

Bristol's new Series 500 Low-Range Absolute Pressure Recording Gauge uses a *single* calibrated bellows, evacuated to practically a perfect vacuum, enclosed in a pressure-tight housing. *No compensation needed* for barometric pressure!

Available for recording, pneumatic or electric controlling, and pneumatic or electric remote transmission. Write for Bulletin G620.

THE BRISTOL COMPANY, 112 Bristol Road, Waterbury 20, Conn. (The Bristol Company of Canada, Ltd., Toronto, Ont.)

BRISTOL

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS

▲ For more details circle **NED-8855** on enclosed inquiry slip ▲

THREAD PROTECTION . . .
Eliminates Screw Thread Troubles

Source: HELI-COIL® CORPORATION
47-62 Thirty-Fifth Street
Long Island City 1, New York

New Screw Thread Insert eliminates stripping, abrasion, wear, corrosion, galling, and seizing. These inserts are durable precision-formed wire inserts of stainless steel or phosphor bronze for use as a permanent tough lining between thread and mating member. They are designed for use in iron and steel, aluminum, magnesium, die metal and other non-ferrous metals; and in wood, plastics and ceramics.

Heli-Coil Screw Thread Inserts assure production economies, improve products . . . save weight and space, make assembly and disassembly easier . . . simple. Heli-Coil Inserts are the low-cost answer to all screw thread troubles.

Write for the Heli-Coil Bulletin No. 650 and prices.

▲ For more details circle **NED-8856** on enclosed inquiry slip ▲

WINCH-HOIST
portable unit has 1½-ton capacity

Having 30 to 1 power ratio and tested to 100 per cent overload, Lug-All portable 1½-ton alloy winch-hoist weighs only 8½ lb. It can be operated in any position and may be set for forward, reverse or free-wheeling. Combination of three swivel hooks and built-in pulley block allows operation around corners and as close as 10 in. at ¾-ton rating. Standard construction employs 10-ft of flexible aircraft cable, stainless steel fittings and springs and oiled-for-life bearings. Locking is positive and automatic. Handle is reversible and can be removed to prevent tampering. Made by **Lug-All Co.**, 331 E. Lancaster Ave., Wynnewood, Pa.

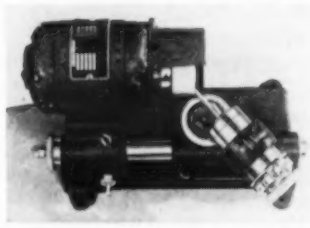
▲ For more details circle **NED-8857** on enclosed inquiry slip ▲

ELECTROLYTIC CAPACITORS
have minimum intersection coupling

Marked reduction in hum is claimed for type AFH or twist-prong base multisection electrolytic capacitors. Type of internal construction used affords low radio frequency impedance and minimum of coupling between sections. Wide selection of capacitance and voltage combinations is offered in this line. Made by **Aerovox Corp.**, 740 Belleville Ave., New Bedford, Mass.

▲ For more details circle **NED-8858** on enclosed inquiry slip ▲

PRECISION TOOL GRINDER
for sharpening engraving cutters



Portable engraver cutters can be sharpened on-the-job with this precision cutter grinder. Index unit on spindle allows operator to grind any desired cutting profile with proper angles and clearance. Two, three and four-fluted cutters can be ground also by using attached indexing plate. Grinder has adjustable clamp head for radius grinding, and rotating base of cutter head has 140-degree graduation. Feed dial is graduated in 0.001-in. increments, and machine is powered by 1/6-hp 6000-rpm universal motor. Made by **New Hermes, Inc.**, Dept. 26, 13-19 University Place, New York 3, N. Y.

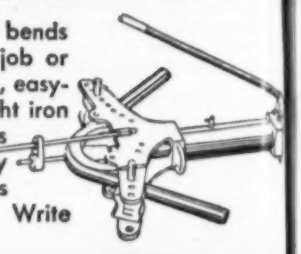
▲ For more details circle **NED-8859** on enclosed inquiry slip ▲

▲ For more details circle **NED-8860** on enclosed inquiry slip ▲

For Installation or Repair
A Portable

Tal Bender

— with new bend indicator —



Anyone can make perfect bends with a Tal machine, on-the-job or in-the-shop. This fast working, easy-to-operate bender for wrought iron or steel pipe does in minutes work that otherwise takes many hours. No wonder thousands are in service everywhere. Write today for factual bulletin.

Tal Bender, Inc. Dept. 4 Milwaukee 2, Wis.

▲ For more details circle **NED-8861** on enclosed inquiry slip ▲

▲ For more details circle **NED-8862** on enclosed inquiry slip ▲

▲ For more details circle **NED-8863** on enclosed inquiry slip ▲

move!

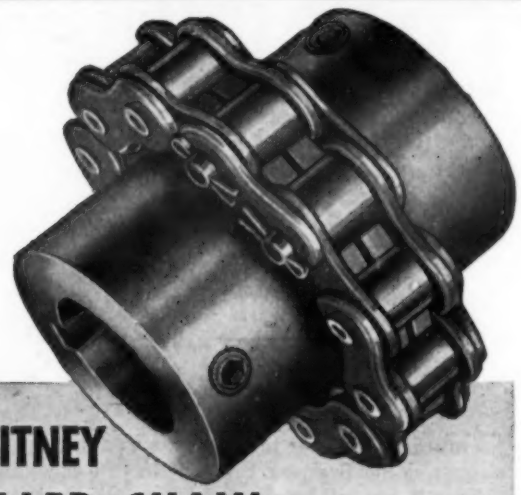
SOAP
SAWDUST
ORE
FERTILIZER
CONCRETE
VEGETABLES
CHIPPED ICE
MEAT
WOOD CHIPS
CANDY
STEEL CHIPS
COAL
FACE POWDER

...and countless other "granulars" with CLEVELAND Type F Air Vibrators

Catalog No. 105 will give you further details

THE CLEVELAND VIBRATOR COMPANY
2745 Clinton Ave. • Cleveland 13, Ohio

For more details circle NED-8864 on enclosed inquiry slip



WHITNEY ROLLER CHAIN Flexible Couplings

FOR YOUR DIRECT POWER DRIVE APPLICATIONS

Whitney Roller Chain Flexible Couplings offer the equipment manufacturer and machine user a practical and efficient unit for connecting power equipment to direct drives. All steel construction . . . precision roller chain and hardened cut tooth sprockets provide positive operation . . . assure long life.

Check these Whitney Flexible Coupling features, easily installed, allows for motor end float, disconnects without removing shafts or bearings, allows for slight shaft misalignment.

You can use Whitney Flexible Couplings wherever a positive yet flexible direct drive is required. Write for information.

WHITNEY CHAIN CO.
203 Hamilton Street, Hartford 2, Conn.

For more details circle NED-8865 on enclosed inquiry slip

Increase Production of Fines by 300% with

STURTEVANT CENTRIFUGAL AIR SEPARATORS

Accurate Separation of Fines from 40 to 325 Mesh and Finer . . .
Output Capacity from ¼ to 50 Tons Per Hour

Records prove that Sturtevant Air Separators cut separation costs of various materials by as much as 300%. In addition, they provide additional economies by reducing power costs up to 50%. That's why you'll find hundreds of these separators in all types of industries. Ruggedly constructed of quality materials, Sturtevant Air Separators keep on working day after day with minimum maintenance. They are available in many sizes from ¼ to 50 tons per hour output.

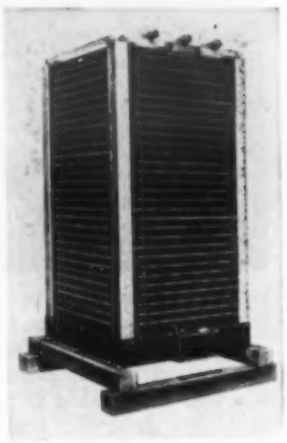
Investigate cost-cutting Sturtevant Air Separators for your plant. Write for catalog and information, today.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASS.

Designers and Manufacturers of
CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS
MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

For more details circle NED-8866 on enclosed inquiry slip

SPRAY COOLING TOWERS for small refrigeration systems



Mass produced in ten frame sizes, type H atmospheric spray cooling towers can be obtained for refrigeration loads varying from 3 to 35 tons such as are encountered with small packaged water-cooled air conditioning and refrigeration condensing units. Pan is made with external bolting flanges for convenient, firm anchoring of tower and to eliminate piercing floor of water basin. Slip-fit louvers of redwood or galvanized steel slide into place through machine-slotted corner posts that assure accurate spacing and angle. Float box is integral part of basin and is mounted externally for easy access to control valve. Rotojet clogproof brass spray nozzles operate on off-center inlet whirl chamber principle to obtain maximum fluid breakup. Made by **Binks Mfg. Co.**, Water Cooling Div., Dept. NED, 3124 Carroll Ave., Chicago 12, Ill.

For more details circle NED-8867 on enclosed inquiry slip

PRECISION SWITCH has large movement differential

Low operating force with large movement differential is provided by type MB snap-acting precision switch. Characteristics of this alternate type basic switch can be utilized for installations which would otherwise require auxiliary actuating means. Electric ratings available include 15 amp 125 v, 5 amp 250 v and ¾-hp at 125/250/460 v ac noninductive. Made by Unimax Switch Div., **W. L. Maxson Corp.**, Room 1510, 460 W. 34th St., New York 1, N. Y.

For more details circle NED-8868 on enclosed inquiry slip

CARBIDE-TIPPED SCRAPER has 2½-in. wide reversible blade

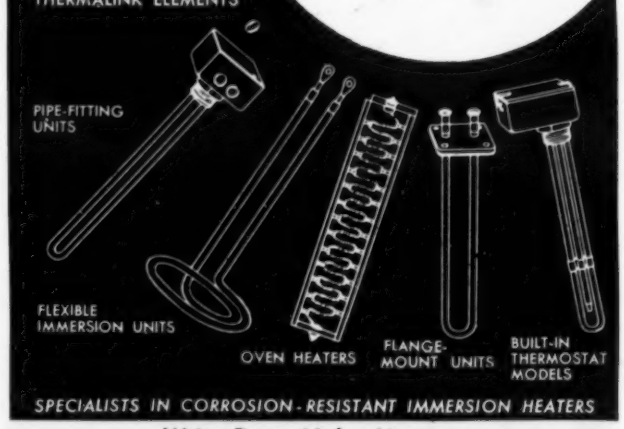
Wood, metal, plastic, glass, slate, marble and masonry can be scraped with this carbide-tipped tool. Shaped and balanced hard wood handle is designed for one or two-hand use. Double Perma-Edge carbide blade can be reversed in holder, and replacement blades are available if required. Because 5 inches of carbide blade are available for scraping, infrequent sharpening is required. List price is $2.95. Made by **New England Carbide Tool Co.**, 54 Brookline St., Cambridge 39, Mass.

For more details circle NED-8869 on enclosed inquiry slip

THERMALINK Electric HEATING ELEMENTS

OVER 600 STANDARD MODELS & TYPES

IMPROVE YOUR ELECTRICALLY HEATED PRODUCTS AND EQUIPMENT WITH THERMALINK ELEMENTS



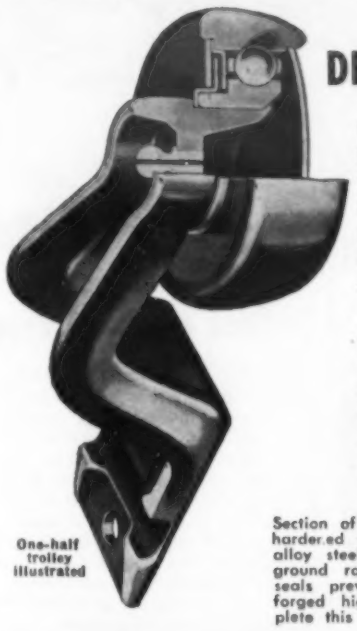
SPECIALISTS IN CORROSION-RESISTANT IMMERSION HEATERS

Write Dept. N for Literature

ELECTRO-THERM INC.
8024 GEORGIA AVE., SILVER SPRING, MD.

For more details circle NED-8870 on enclosed inquiry slip

WEBB • A 4-LETTER WORD FOR DEPENDABILITY



One-half trolley illustrated

Webb's advanced engineering and modern manufacturing methods have paced industry's demand for better conveyor equipment. For over 30 years WEBB has accented DEPENDABILITY and functional design in every component part with resulting longer life—and continual production line operation. Specify WEBB—and be sure of the best. Send for Catalog No. 46.

Section of WEBB trolley. The flangeless, hardened steel wheel has eight 15/32" alloy steel balls in the large precision ground races. Double labyrinth grease seals prevent lubricant leakage. Drop-forged high alloy steel brackets complete this exceptionally sturdy assembly.

JERVIS B. WEBB COMPANY
MANUFACTURERS OF OVERHEAD AND FLOOR TYPE CONVEYORS
OFFICES IN PRINCIPAL CITIES
8921 ALPINE AVE.
DETROIT 4, MICH.

For more details circle NED-8871 on enclosed inquiry slip

FOR YOUR INFORMATION

NEW 12 PAGE BULLETIN DESCRIBES I-T-E MOLDED CASE CIRCUIT BREAKERS

• Bulletin 5004-D provides a quick, easy reference to the *complete* line of I-T-E Molded Case Circuit Breakers: 125 to 600 v. a-c, 125 to 250 v. d-c; 10 to 600 amps. continuous rating. (All sizes approved by Underwriters' Laboratories, Inc.)

12 pages of photographs, drawings and factual data.

Reading time 9 minutes.

Ask for Bulletin 5004-D

I-T-E CIRCUIT BREAKER CO.
19th and Hamilton Sts., Philadelphia 30, Pa.

SWITCHGEAR • UNIT SUBSTATIONS • CIRCUIT BREAKERS
ISOLATED PHASE BUS STRUCTURES • MECHANICAL RECTIFIERS
RESISTORS • SPECIAL PRODUCTS

For more details circle NED-8872 on enclosed inquiry slip

be fresh stay fresh

wear COVER'S FOG-PROOF GOGGLES

FAMOUS "Nod & Shake" Type

Used by thousands, for years, to protect eyes against paint spray, gases, dusts, fumes, smoke. Can be worn with any make respirator. Frames are of soft, pliable rubber that give air-tight fit on any shape face. A few drops of water placed in patented groove keeps fog from forming on inside of single lenses. An easy nod and shake of the head keeps lenses clear indefinitely.

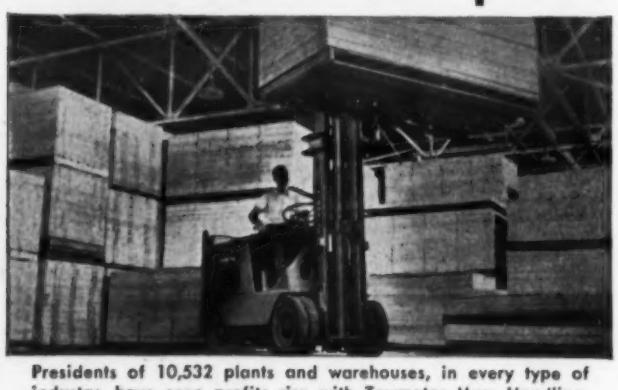
Sample sent $1.85 pp

H. S. COVER, South Bend, Ind.

For more details circle NED-8873 on enclosed inquiry slip

10,532 PRESIDENTS* ARE RIGHT!

TOWMOTOR increases profits



Presidents of 10,532 plants and warehouses, in every type of industry, have seen profits rise with Towmotor Mass Handling. Production man-hours are saved, payroll costs are cut from 25% to 60% as Towmotor moves tons of goods in minutes instead of hours. Twelve special attachments simplify difficult handling jobs. Find out how modern plants increase profits with Towmotor Mass Handling. Write today for "Handling Materials Illustrated." Towmotor Corporation, Div. 25, 1226 E. 152nd St., Cleveland 10, Ohio. Representatives in all principal cities in U. S. and Canada.

* Towmotors increase profits everyday for 10,532 modern American industries.

TOWMOTOR THE ONE-MAN-GANG FORK LIFT TRUCKS and TRACTORS

Mass Handling is the answer!

RECEIVING • PROCESSING • STORAGE • DISTRIBUTION

For more details circle NED-8874 on enclosed inquiry slip

Traffic lanes take a beating. Renew and protect them with Plastic Rock. It packs hard, improving under heavy traffic. Ten-year old floors show no wear. Plastic Rock reduces noise, is fire-resistant, skid-safe, wet or dry; bonds perfectly to concrete, wood or steel. All ingredients packed complete in a handy barrel. Your own crew or contractor can easily apply. Plastic Rock puts shock-absorbers on your floor.

in 48 HOURS!

ASK FOR REPORT 220-N-12.

UNITED LABORATORIES INC., 16804 Euclid Ave., Cleveland 12, Ohio

TESTED-APPROVED ULI UNITED LABORATORIES INC. PRODUCTS AND PROCESSES for PROTECTING PROPERTY

Field Representatives All Over The World

For more details circle NED-8875 on enclosed inquiry slip

VALVE & FLANGE COVERS protect against corrosive spray

Safety from accidental spray arising from leaks developing in valve packing or flange gasketing is afforded workers and equipment by these Vinyon N protective-coated plastic fabric valve and flange covers. Waterproof and highly resistant to practically all industrial chemicals, they can be used on installations having elbows, tees, valves and special fittings as well as on straight line applications. Drain holes are provided to carry off seepage and are located to prevent any spraying out of fluid. Although designed primarily to protect against spray, covers will contain breaks of reasonable pressure long enough to protect personnel in vicinity. In addition, they enable nuts, bolts and threads to be kept greased and protected from weather for easy maintenance. Made by **Milsheff,** 744 Broadway, New York 3, N. Y.

For more details circle NED-8876 on enclosed inquiry slip

SWEEP GENERATOR supplied with two built-in markers

Designed to provide complete facilities for TV and FM servicing and other electronic requirements, model No. 3434 sweep generator has large marker dial mirrored for easy reading and improved reset accuracy. Two built-in markers can be used simultaneously and provide 19.5 to 40-mc frequency for IF and 57 to 240-mc frequency for RF and oscillator. Continuous tuning is provided over all TV and FM bands, and sweep width is continuously variable from 0.1 to 12 mc. Stability can be increased by use of ceramic trimmers, zero temperature coefficient capacitors, silver plated coils and critical RF conductors. Made by **Triplett Electrical Instrument Co.,** 10 Harmon Rd., Bluffton, O.

For more details circle NED-8877 on enclosed inquiry slip

DO YOU KNOW? Industrial color television using coaxial cable closed-circuit can be used for remote viewing of almost any critical operation or process. High fidelity is obtained because such television is not subject to frequency bandwidth restrictions and other limitations. Several 12½-in. high-intensity monitors which permit daylight viewing can be employed when the audience is large. Equipment developed by Du Mont Laboratories, Inc., Television Transmitter Div., 1010 Main Ave., Clifton, N. J.

For more details circle NED-8878 on enclosed inquiry slip

From maker to market...

BUSCHMAN CONVEYORS
Save Time, Cut Costs

Yes, even in department stores*, Buschman Conveyors speed and simplify product handling. From manufacturing, assembling, warehousing, shipment . . . every step of the way to the consumer . . . you'll see Buschman Conveyors. Without cost or obligation, you can find out how and how much rugged, low-cost Buschman Conveyors can save you.

*Rich's Department Store, Atlanta, Georgia

Buschman Conveyors

THE E. W. BUSCHMAN CO., INC.
Spring Grove at Winton Place
Cincinnati 32, Ohio

For more details circle NED-8879 on enclosed inquiry slip

• Flange Units
• Pillow Blocks
• Take-Up Units
• Cartridge Units
• Hanger Units

SEALMASTER BALL BEARING UNITS

Investigate these Important Features

FOR TOP PERFORMANCE!

✓ **Permanently Sealed.** Patented centrifugal, felt-lined flinger sealing principle seals *in* lubricant, seals *out* dirt and dust, cuts maintenance costs.

✓ **Self-Aligning.** SealMasters are fully self-aligning . . . misalignment of the shaft cannot interfere with the effectiveness of the seal.

✓ **Pre-Lubricated** at the factory, the SealMaster reaches you ready for immediate service.

These points, plus many other engineering features, mean that SealMasters are built to last longer, and give more satisfactory service. Specify SealMasters for replacements, and for new products.

Request a Copy of Catalog 845 for complete details

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.

Tellevel—Bin Level · SealMaster Ball Bearings · Controls · Car Loaders · Car Pullers · Winches · ChangeMaster Variable Speed Reducers · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILL.

For more details circle NED-8880 on enclosed inquiry slip

ERASE *faster, easier electrically!*

Bruning's exclusive 7" eraser... won't "fly out"

No other machine or method erases as quickly, easily and cleanly as the Bruning Electric Erasing Machine.

The 7" eraser (exclusively Bruning's) prevents those eraser "fly outs" which let ordinary machines damage your drawings so often.

Your Bruning machine is "lifetime oiled", runs continuously for an indefinite period without heating. It is quiet and you hold it comfortably like a pencil, permitting full view of your work for erasing accuracy. You operate it with convenient finger-tip control.

FREE FOLDER gives details on exclusive erasing advantages. For your copy write today to Charles Bruning Company, Inc., Dept. J120, 100 Reade Street, New York, New York.

BRUNING ERASERS

For more details circle NED-8881 on enclosed inquiry slip

new removable stickers

faster to apply...easy to remove!

The remarkable, new "active adhesive" of *Kum-Kleen* pressure-sensitive Labels seals them to the most difficult-to-label surfaces without heat or moistening...labels never curl or pop, even in temperature and humidity extremes. Because they're peelable, they may be placed on parts and equipment in the exact spot they should go. Will not mar the surface or leave a trace.

Kum-Kleen labeling pays its own way! Many users say the time and money savings of *Kum-Kleen* dispensing methods pay cost of labels!

Kum-Kleen

ADDRESS: DEPT. NED-12
AVERY ADHESIVE LABEL CORP.
MONROVIA, CALIFORNIA

For more details circle NED-8882 on enclosed inquiry slip

● Practically any standard high-speed motor can be used with a *SACO* Reducer to drive machinery and equipment at various speeds. First reduction is through V-belt sheaves. Second reduction is made through steel helical gears. Output speed may be changed by changing only a sheave. *SACO* Reducers are powerfully constructed with a minimum of parts. Motor is mounted on hinged base on top of reducer, cutting down the amount of floor space needed. Write for information.

STEPHENS-ADAMSON MFG. CO.

Tellevel—Bin Level · SealMaster Ball Bearings · Controls · Car Loaders · Car Pullers · Winches · ChangeMaster Variable Speed Reducers · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILL.

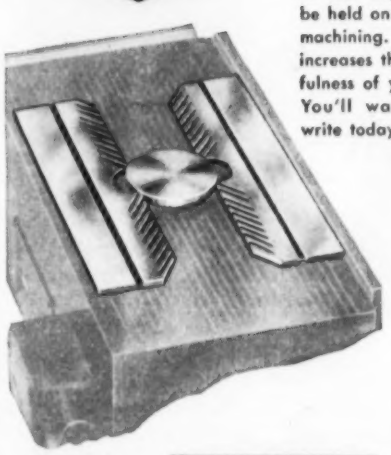
▲ For more details circle **NED-8883** on enclosed inquiry slip ▲

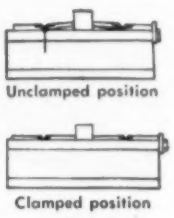
Magna-Vise ★

THIS IS IT

FOR HOLDING YOUR NON-MAGNETIC MATERIALS

Permits brass, copper, plastics, glass, hard rubber, aluminum — in fact *any* rigid material — to be held on a magnetic chuck for machining. Magna-Vise greatly increases the versatility and usefulness of your magnetic chucks. You'll want *all* the facts... write today, Dept. ND-120.





Get the story, too, on Magna-Lock Chucks... *first* to increase your machine's productivity.

• Patented

HANCHETT Magna-Lock **CORPORATION**

Magnetic Chucks and Devices

BIG RAPIDS, MICHIGAN

▲ For more details circle **NED-8884** on enclosed inquiry slip ▲

ROTARY
INDUSTRIAL
BRUSHES

Let "PITTSBURGH" solve your brush problems

Modern production looks to rotary power-driven brushes for processing most metal and plastic surfaces, and the right brush means *better quality work, increased production, lower costs.*

Our skilled brush engineers will design and build power-driven brushes to meet your particular requirements. Or, you may find what you need in the regular Pittsburgh line, because there's a Pittsburgh brush for every industrial use.

See your Supplier or contact PITTSBURGH PLATE GLASS COMPANY, *Brush Div.*, Dept. M-4, 3211 Frederick Ave., Baltimore 29, Maryland.

PITTSBURGH *Power Driven* **BRUSHES**

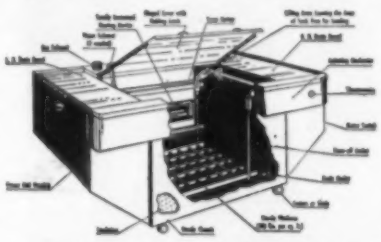
BRUSHES • PAINT • GLASS • CHEMICALS • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

▲ For more details circle **NED-8885** on enclosed inquiry slip ▲

CHIP REMOVING MACHINE uses hot or cold cleaning solutions

Removal of metal chips and light oil from machined parts is facilitated by Aja-Dip chip removing machine. Batches of parts are vigorously agitated up and down through cleaning solution 54 times per minute. At each up and down stroke solution is put in turbulent motion, swishing through parts at each change of stroke. As solution rushes back and forth against and through parts, it scrubs parts and removes metal chips, oil and dirt even in center of load. Machine is available in several sizes to handle from 75 to 10,000 lb of parts per batch. Only manual loading and unloading are necessary. Solutions can be heated by gas, steam, fuel oil, kerosene or electricity. Made by **Magnus Chemical Co.**, Dept. NED, 42 Bridges St., Garwood, N. J.

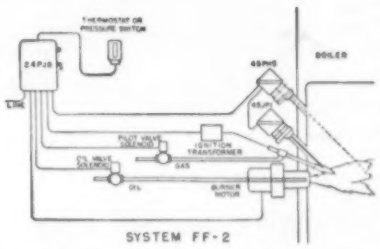


▲ For more details circle **NED-8886** on enclosed inquiry slip ▲

FLAME FAILURE CONTROL safeguards gas and oil burners

Both pilot gas flame and main flame on industrial gas-oil conversion burners are supervised by this positive-acting flame failure control. System consists of electronic flame rod, photoelectric scanner and programming control. If pilot does not ignite, flame rod signals to programming control which shuts down burner. With proper ignition, main fuel valve opens. Its flame is then monitored by scanner when oil is used or by flame rod when gas is main fuel. Photoelectric scanner, containing both phototube and amplifier, can withstand relatively high ambient temperature and humidity.

FULL-AUTOMATIC FLAME CONTROL, GAS PILOT AND OIL BURNER



SYSTEM FF-2

Accurate settings of both fuel valve delay and post ignition periods are provided by programming control. Large dial calibrated in seconds simplifies settings. Timing is accomplished through synchronous motor. Power supply is 115/208/230-v 50/60-cycle ac. Load ratings are 1-hp burner motor, 250-va ignition, 100-va fuel valve solenoid and 25-va gas valve solenoid. Made by **Combustion Control Corp.**, 78 Broadway, Cambridge 42, Mass.

▲ For more details circle **NED-8887** on enclosed inquiry slip ▲

DO YOU KNOW? Improved economy will be feature of the 10th International Heating and Ventilating Exposition which will be held in the Commercial Museum, Philadelphia, Jan. 22 to 26, 1951. All of the latest developments in the field of heating, ventilating and air conditioning will be presented. For full information, write to International Exposition Co., 480 Lexington Ave., New York 17, N. Y.

▲ For more details circle **NED-8888** on enclosed inquiry slip ▲

I CAN DO A BIGGER AND BETTER DAY'S WORK ON A

CHALLENGE WORK BENCH

Four Sizes
28 inches wide x 4, 5, 6 or 7 ft. long. Top 2" thick.

665

HERE'S WHY: Heavily ribbed, smoothly machined cast-iron top provides a "surface plate" . . . Table equipped with lock-leveling screws . . . Steel shelf in sturdy steel welded base . . . Steel tool box shelf, guard rail, and drawer with lock . . . Vise and individual light can be easily attached . . . Bench is portable. Write for details.

THE CHALLENGE MACHINERY CO.

Office, Factories, Show Room Challenge *Grand Haven, Michigan*

▲ For more details circle **NED-8889** on enclosed inquiry slip ▲

Whether you want standard drives or special units, Cleveland can serve you.

Prompt service on dependable worm gearing

CLEVELAND offers a complete line of worm-gear sets and speed reducers, including the popular fan-cooled Speed-aire, to meet the needs of any machinery or equipment builder or user. Representatives in all major industrial centers are at your service. Write for the latest Cleveland catalog, indicating your requirements. Your inquiry will receive prompt attention. The Cleveland Worm & Gear Company, 3283 East 80th Street, Cleveland 4, Ohio.

CLEVELAND Worm Gear *Drives*

▲ For more details circle **NED-8890** on enclosed inquiry slip ▲

LETS HAVE THE TOUGHEST CHAIN JOB IN YOUR PLANT

● Put HERC-ALLOY Steel Chain on the toughest job you can find. Let HERC-ALLOY service-experience records give you first hand, the undeniable answers in black and white.

Production executives and safety directors who have used HERC-ALLOY for slings or other applications agree they have yet to find an alloy steel chain superior to HERC-ALLOY.

COLUMBUS McKINNON CHAIN CORPORATION

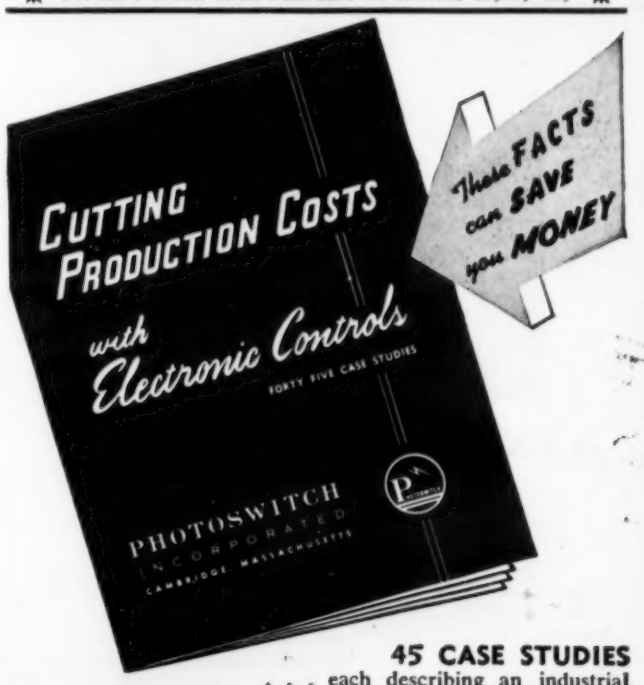
(Affiliated with Chisholm-Moore Hoist Corporation)

GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.

SALES OFFICES: NEW YORK • CHICAGO • CLEVELAND • SAN FRANCISCO

Other Factories at Angola, New York, St. Catharines, Ontario and Johannesburg, S. A.

▲ For more details circle **NED-8891** on enclosed inquiry slip ▲



45 CASE STUDIES

. . . each describing an industrial control problem which has been solved through the use of electronics. Not a catalog . . . it shows HOW photoelectric and electronic controls count, guard, sort, weigh, measure, maintain liquid levels, program operating cycles and do countless other tasks with unfailing accuracy and amazing speed.

Write for your copy today.

PHOTOSWITCH INCORPORATED
77 Broadway, Cambridge 42, Massachusetts

▲ For more details circle **NED-8892** on enclosed inquiry slip ▲

DURA-TRED FLOORS TAKE IT!

On
LOADING PLATFORMS
FREIGHT ELEVATORS
DRIVEWAYS ETC.

RENEW Beat-Up Old Floors for efficient operation inside or out. Dura-Tred quickly solves your problem on wood block, wood plank, concrete or metal. Lay it on a square foot a minute—start using it right away. Repair holes and rough spots on ramps, runways, truck beds, etc. Will last years under any weights the under flooring will stand. See Dura-Tred floors that have taken years of rough traffic; we'll tell you of the Dura-Tred floors near you. Write us.

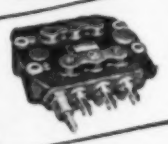
Dura-Tred's "QUICK-FLOOR" over metal, concrete | Dura-Tred's "OVER WOOD PLASTIC" over wood floors

• DURA-TRED COMPANY •
The Original Floor Patcher and Surfacer Since 1938
367 N. Central Park Blvd. Chicago 24, Ill.

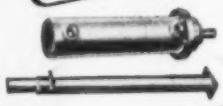
For more details circle NED-8893 on enclosed inquiry slip

OIL-HYDRAULIC PUMPS • VALVES • CYLINDERS
Look to HYDRECO for ALL THREE!

Four-Bolt pumps
HYDRECO gear type pumps are made in five basic sizes with a variety of flange or base mounted types, ½ GPM to 130 GPM, and for operating pressures up to 1500 p.s.i.



control valves
HYDRECO control valves are made in a variety of sizes and plunger arrangements, in capacities from ½ GPM to 150 GPM, and for operating pressures up to 1500 p.s.i.



cylinder assemblies
HYDRECO cylinders are made in single-acting, double-acting and telescopic designs in sizes up to 8" effective diameter. Plain, eye-type, or ends of special design are available for all sizes.

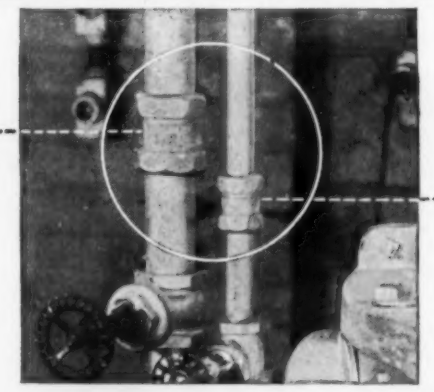
NOW, MORE THAN EVER BEFORE!
LOOK TO HYDRECO FOR ALL THREE
for – PERFORMANCE
– QUALITY
– DESIGN

Send for Bulletin 101 showing complete line of gear pumps, control valves, auxiliary valves, cylinder assemblies and combination pump-valve-tank units.

Write to
HYDRAULIC EQUIPMENT COMPANY
1108 EAST 222ND STREET • CLEVELAND 17, OHIO

HYDRECO
HYDRAULIC CONTROL DEVICES
PUMPS · CYLINDERS · VALVES
THE MARK OF QUALITY

For more details circle NED-8894 on enclosed inquiry slip



"FLEXIBLE-TIGHT" JOINTS
FOR FACTORY PIPING

For piping up to 2" in diameter, Dresser Style 65 "No-Thread" Fittings provide quick, permanent connections. On equipment piping, on gas, oil, water, air lines, these handy joints stay tight despite vibration, expansion and contraction. No pipe threading, no exact pipe aligning. The only tool needed is a wrench. Write today for catalog.

DRESSER "NO-THREAD" FITTINGS

Dresser Manufacturing Division (One of the Dresser Industries), 59 Fisher Ave., Bradford, Pennsylvania. In Texas: 1121 Rothwell St., Houston. In Canada: 629 Adelaide St., W., Toronto. Sales Offices: New York, Chicago, Houston, San Francisco.

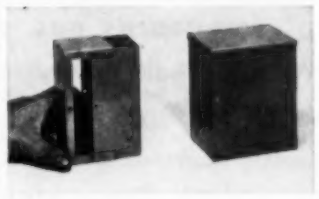
For more details circle NED-8895 on enclosed inquiry slip

COOLANT DESLUDGER
removes filings and abrasive grains

Installed on edge of machine tool coolant tank, model SF-01 vibratory screening feeder removes steel filings and abrasive grains from coolant in form of sludge. Cleaned coolant returns to reservoir for reuse, while sludge is discharged into separate receptacle. On test run approximately 90 per cent of foreign particles was removed from coolant so that only infrequent cleaning of coolant reservoir was required. Made by **Syntron Co.,** 405 Lexington Ave., Homer City, Pa.

For more details circle NED-8896 on enclosed inquiry slip

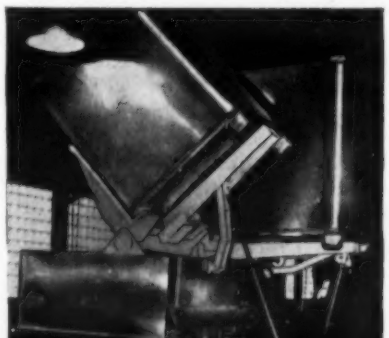
ALUMINUM CASES
for shielding electronic equipment



Available in thirteen sizes ranging from 2¾ x 2⅛ x 1⅝ in. to 17 x 5 x 4 in., two-piece Flexi-Mount aluminum cases are designed to house electronic components which require complete shielding. Interlocking sections are accurately formed for snug fit and are joined with self-tapping screws. Finish is natural or gray Hammertone. Made by **Insuline Corp. of America,** Dept. NE, 3602 35th Ave., Long Island City 1, N. Y.

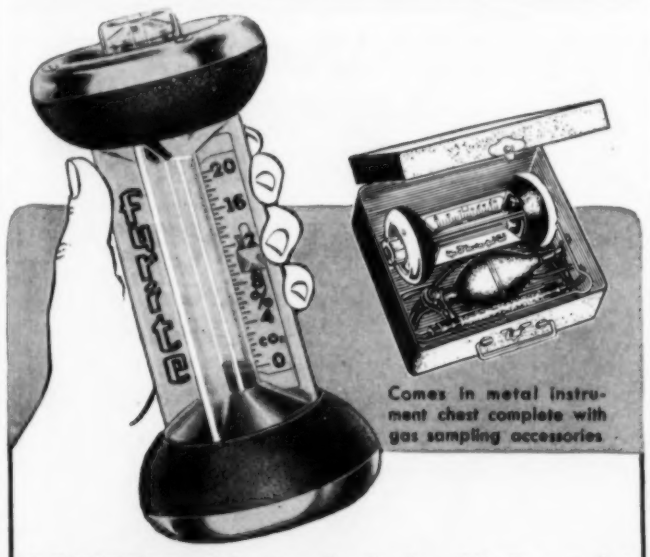
For more details circle NED-8897 on enclosed inquiry slip

PNEUMATIC TILTING DEVICE
facilitates discharging hopper bins



Designed to permit fast discharge of material from Tote bins through gravity discharge tilting devices into receiving hoppers, illustrated pneumatic tilting device employs air cylinders for rapid tilting action and electric vibrators to aid product discharge. Shown are one bin in discharge position and other in place on tilting mechanism ready for tilting to discharge position. Large detergent manufacturer who recently installed this equipment has found that entire contents of 74-cu ft Tote bins can be discharged in less than 2 minutes floor-to-floor time. Made by **Tote System, Inc.,** 710 S. Seventh St., Beatrice, Nebr.

For more details circle NED-8898 on enclosed inquiry slip



ACCURATE CO_2 Analysis in 40 Seconds!

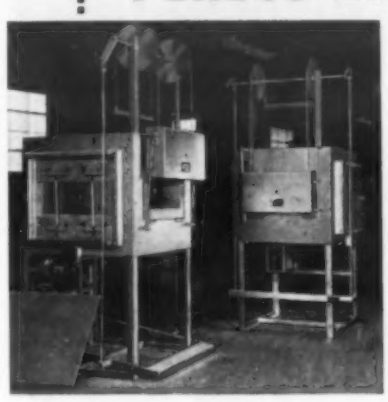
Other outstanding features of the FYRITE CO_2 Indicator are its durable, fool-proof construction and unmatched convenience of operation. It requires no setting-up, has no valves or leveling bottle to manipulate.
The FYRITE measures CO_2 directly by the fundamental method of chemical absorption. Consequently, the reading is independent of voltage, humidity, temperature, or atmospheric pressure conditions.
Comes complete with chemical charge good for at least 300 readings. Replacing chemical merely requires removing four screws that hold top assembly in place.

Write for Bulletin 740

BACHARACH Industrial Instrument Company
7000 Bennett Street • Pittsburgh 8, Pa.

For more details circle NED-8899 on enclosed inquiry slip

Choose from a wide variety of
PERECO Electric Furnaces



• Assay Furnace is one example

Pictured at left, from two angles, is the new Model AF-320. To mining assayers, it offers clean, electric heat for uniform accuracy in fusing and cupelling operations. Reaches 2000° F. in about 2 hrs., at a maximum 25 kw. Normal temperatures require only 12 to 15 kw.

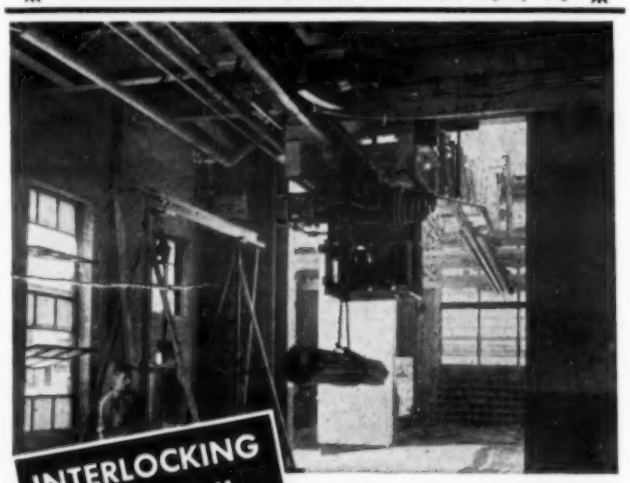
Standard and special units 450° to 5000° F.

This Assay Furnace is typical of Pereco Electric Furnaces engineered for many industrial uses in research, pilot plants, and production. A stock type from this line may answer your needs. Should none of these match your exact job requirements, our facilities for developing special equipment are ready to serve you. In either case, we invite your inquiry.

Send for "get-acquainted" folder

PERENY EQUIPMENT COLUMBUS OHIO
PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, O.
EXPORT DEPT.
The Inland Export Co., Inc.
Greer Bldg., New Castle, Pa.

For more details circle NED-8900 on enclosed inquiry slip



INTERLOCKING MONORAIL SYSTEM
Solves Steel Distribution Problem

From car or truck unloading to storage to machine rooms by aid of MonoRail 5-ton high speed crane and power operated MonoRail carier with interlocking tracks between buildings solves the steel distribution job at The Jeffrey Manufacturing Co.

We'll be glad to send you the whole story.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

For more details circle NED-8901 on enclosed inquiry slip

DIVE DEEP
...into this million-dollar question!

You may come up with
SUNKEN TREASURE that you never knew you had!

HERE'S THE "$1,000,000 QUESTION": *"Can my product be made to COUNT — to the greater profit of its users?"*
Now ask for the answer from a Veeder-Root engineer, experienced in discovering and developing hidden COUNTability in countless products. He'll tell you, quickly and frankly, whether *your* product has this modern merchandising magic . . . and show how to bring it out. Count on him to show you how to build Veeder-Root Counters into your product as integral parts . . . *and then see how sales will build up!* Write.

VEEDER-ROOT INC., Hartford 2, Conn.

For more details circle NED-8902 on enclosed inquiry slip

QUIET PLEASES!

when you specify BOSTON Gear

1951 Model COUPLINGS
from Nearby Stock

Precision Machined three-piece construction with oil resistant, synthetic rubber insert that absorbs vibration and shock—assures QUIET, FLEXIBLE operation. Easy to install. Dust and dirt proof. In stock for shaft diameters from 3/8" to 1½". See Boston Gear Catalog No. 55.

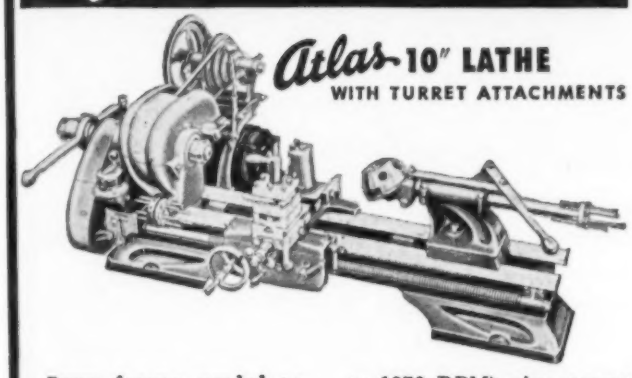
STOCKED BY 80 AUTHORIZED BOSTON GEAR DISTRIBUTORS

BOSTON Gear stocks are Near

BOSTON GEAR WORKS
69 HAYWARD ST., QUINCY 71, MASS.

For more details circle NED-8903 on enclosed inquiry slip

LOWEST COST SEMI-AUTOMATIC TURRET LATHE



Atlas 10" LATHE WITH TURRET ATTACHMENTS

Every feature needed to handle small parts production *quickly* and *economically* is provided by this Atlas 10" lathe with turret attachments. It's the ideal low-cost solution to today's small parts production problems.

Headstock spindle is Timken roller bearing equipped to stand up through round-the-clock production runs. Heaviest back gears of any 10" lathe permits *heavier cuts*. 16 spindle speeds (28 to 1072 RPM) give correct speed for every operation. Complete V-belt drive. Spindle hole takes stock up to 15/16".

See how this rugged, precision-built Atlas can save you money on small part production runs. Send for latest catalog with complete details.

Atlas Press Co.
1223 N. PITCHER ST.
KALAMAZOO, MICHIGAN

MATCHED PRECISION TOOLS FOR WOODWORKING AND METALWORKING

For more details circle NED-8904 on enclosed inquiry slip

Viscous Materials

FLOW LIKE WATER

through

Parks Jacketed Cocks Fittings and Pipes

You can't find a better way to convey asphalt, rosin, wax, sulphur, gums, syrups, or other solid or viscous materials than through PARKS Jacketed Lines.

Steam, hot water, or hot oil keep the contents in a quick moving liquid state. Plug-ups and troubles are eliminated.

Jacketed Cocks and Fittings are cast with special alloy 40,000 # T.S. iron. Cocks have stuffing boxes and glands for extra safety and tightness.

Pipes and Fittings are made in standard sizes with 1¼", 1½", 2", 3", and 4" inside diameter, and include Two-way and Three-way Cocks, Tees, Crosses, 90° and 45° Elbows, and Expansion Joints, also 2" and 3" Relief Valves.

Write for Bulletin No. 245

Jacketed Tee

Parks-Cramer Company
ENGINEERS and CONTRACTORS
Fitchburg, Massachusetts

Jacketed 3-Way Cock

For more details circle NED-8905 on enclosed inquiry slip

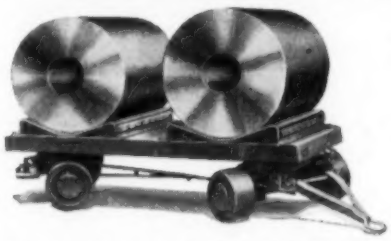
TIME SWITCH
has electric and spring-drive clock

Having dial calibrated in 15-minute intervals, this time switch will turn electrical equipment on and off automatically at any preset time once in every 24 hours. It utilizes combination electric and spring-driven clock so that, if power should fail, spring-driven unit is actuated instantly. It is rated at 20 amp, has single-pole switch and measures 5⅛ x 9⅛ x 3⅞ in. Steel case is dust and drip-proof, and hinged cover can be sealed against tampering. Auxiliary spring can be wound without breaking seal. Made by **Hagen Mfg. Co.**, Dept. 5, Baraboo, Wis.

For more details circle NED-8906 on enclosed inquiry slip

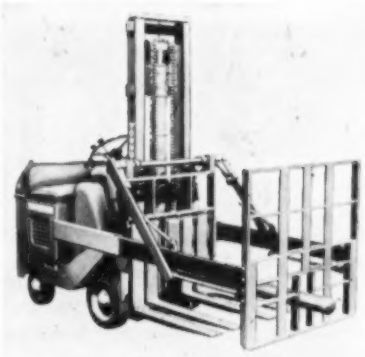
10-TON CAPACITY TRAILER
for transporting coiled strip steel

Designed for carrying two 48-in. diameter coils of strip steel, this tractor-drawn trailer is arranged so that strip will ride in tandem on V-blocks. Rubber covering on blocks protects steel against damage during transit, and wide wheel base and low center of gravity eliminate danger of tipping over. Bed height is 24 in., width 26 in. and overall body length 102 in. It is equipped with solid rubber tire wheels and Timken roller bearings. Made by **Phillips Mine & Mill Supply Co.**, 2303 Jane St., Pittsburgh 3, Pa.



For more details circle NED-8907 on enclosed inquiry slip

COILED WIRE UNLOADER
combines ram and hydraulic unloader



Coiled wire can be handled in either of two ways by these accessories which fit model LT-40 lift truck. Forks and ram are used interchangeably with unloader attachment. With forks, load of spools is lifted directly from pallet. When ram is attached, coils in vertical position are loaded by inserting ram through open center of coils. Hydraulic unloader pushes coils off either forks or ram. Made by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

For more details circle NED-8908 on enclosed inquiry slip

SAVE SETUP TIME

DRILLING
MILLING
GRINDING
PLANING
SLOTTING
BORING

SUPER-SPACER

Output of machined parts is speeded up without sacrifice of accuracy with a Super-Spacer. This indexing fixture allows rigid control of the machining operation, yet saves expensive setup time on long or short runs. Send for Bulletin S-101.

HARTFORD Special

THE HARTFORD SPECIAL MACHINERY CO.
HARTFORD 12, CONN.

For more details circle NED-8909 on enclosed inquiry slip

Remove SCALE, PAINT, RUST Quickly . . . Easily

USE AURAND CLEANING TOOLS

For any hard metal or stone surface—iron—steel—brick—concrete—etc.

Electric and Pneumatic 2 sizes of each

It's easy to remove paint, scale, rust and other accumulations with AURAND Cleaning Tools. Powered rotary chipping does a thorough cleaning job in less time. No special skill required. Even depth surface is assured by an adjustable shoe control. Cutter heads are renewable.

For further information, address Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle NED-8910 on enclosed inquiry slip

Here's why
TRU-LAY PUSH-PULL
is a valuable aid in machine design

TRU-LAY Push-Pull is precision-made. Therefore it . . .

. . . is positive in action as a steel rod, yet flexible as wire rope

. . . transmits action over long or short lengths, with few or many bends

. . . will operate while flexing, with practically no lost motion

. . . is made in capacities up to 1000 pounds input

. . . is designed for long life—a machine part—not a flimsy gadget

MAIL THE COUPON BELOW

(to our Detroit Office) for bulletin of information about TRU-LAY Push-Pull.

6-235 General Motors Bldg., Detroit 2
•
1119 Santa Fe Avenue, Los Angeles 21
•
Bridgeport, Conn.

ACCO

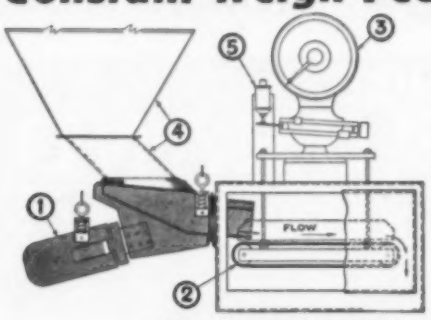
AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE

Please send me copy of descriptive bulletin DH-87-D-1.

Name _____
Company Name _____
Address _____
City _____ Zone _____ State _____

For more details circle NED-8911 on enclosed inquiry slip

For Really Accurate Constant Weigh Feeding!



1—Vibratory Feeder.
2—Scale-suspended, constant-speed belt conveyor.
3—Weighing Scale.
4—Supply Hopper and Chute.
5—Automatic Electric Control of Feeder's Flow.

The Always Dependable
SYNTRON
GRAVIMETRIC FEEDERS

—with their purely "ELECTRONIC" instantaneous correction of even the slightest variation in weight in the flow of bulk material, offer accuracies far beyond those possible with mechanically controlled equipment.

Small sizes for weigh feeding chemical reagents—up to huge models for hundreds of tons per hour of ore, coal, limestone, etc.

Write for new brochure on Weigh Feeding

SYNTRON CO.
405 Lexington Homer City, Pa.

For more details circle NED-8912 on enclosed inquiry slip

Here is the most recent installation of a company who have used Fauver Conveyor Lubricators for sixteen years . . the problem: to keep the conveyor wheels free to avoid chain breakage while operating through washing machines and enameling ovens. Excerpt from an official's letter:

"our first FAUVER *Automatic*

CONVEYOR LUBRICATOR was installed in 1934" . . .

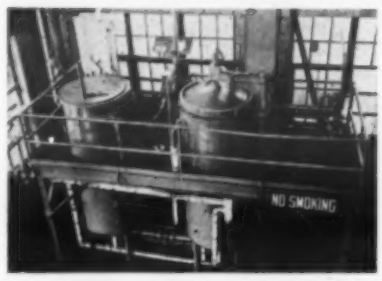
"the conveyor is 3700 feet long and goes through enamel ovens, so lubrication was a serious problem. Several types of lubricators were tried without success. We resorted to manual application of oil which was an expensive item. This was necessary because when a sufficient number of wheels froze, the chain would break, meaning a cessation of production . . . This Automatic Trolley Lubricator now keeps the wheels well oiled, the oil is applied in a mist so that it does not get on the enameled work and those former mechanical troubles are eliminated" . . . there are

also **FAUVER AUTOMATIC GREASE Lubricators driven by contact with the trolley wheels; operates on wheels equipped with or without Grease fittings—we specialize in conveyor lubrication problems—send for complete information**

J. N. FAUVER COMPANY, INC.
43 W. Hancock DETROIT 1.

For more details circle NED-8913 on enclosed inquiry slip

IMPREGNATING EQUIPMENT includes pressure and vacuum styles



Electrical coils, carbon parts, wood and wide variety of other materials can be impregnated with various compounds in this line of impregnators. Equipment is available in complete range of sizes for vacuum and pressure operation, using steam, electricity or Dowtherm for heating, or for nonheated operation. Either complete units can be supplied, or if desired, principal parts only will be furnished. Features include quick-opening closure actuated by push button. Made by **Struthers Wells Corp.**, Warren, Pa.

For more details circle NED-8914 on enclosed inquiry slip

SELF-SPRUNG TRAILER AXLE installation requires but four bolts

Recommended for use on various types of industrial trailers, concrete mixers, spraying equipment and portable generating plants, this ASF-Linco Level Load self-sprung towed-trailer axle is easily installed. It consists of two helical torsion springs around forged steel axle member with offset wheel spindles and two bearing brackets for trailer body support. Installation is achieved by bolting axle assembly to trailer body through bearing brackets. Axles can be installed singly or in tandem, and design permits use of conventional wheels, hubs, roller bearings and brakes. Should one spring be damaged, other carries load; if both should fail, operation continues as dead axle unit. Made by **American Steel Foundries**, 406 N. Michigan Ave., Chicago 11, Ill.

For more details circle NED-8915 on enclosed inquiry slip

CHEMICAL CONTAINERS are of hot-gas welded polyethylene

Ease of transportation and storage are features of these compact lightweight polyethylene containers for corrosive chemicals. Bottles, jugs, buckets and carboys are made of polyethylene tubing with bottom, cover and spout welded by hot-gas process. Safety jugs are filled through pouring spout to level which prevents accidental spilling during transportation.

Screw cap is tight-fitting and leakproof. Bottles are made in pint and quart, and ½, 1 and 3 gallon sizes. Made by **American Agile Corp.**, Plastics Div., Dept. E, 5806 Hough Ave., Cleveland 3, O.

For more details circle NED-8916 on enclosed inquiry slip

STRAIGHTEN COIL STOCK FOR PRESSES, SHEARS OR SLITTERS

WITH **LITTELL** Variable Speed STRAIGHTENING MACHINES

Output rises, costs drop when coil stock is fed to the press, the shear, or the slitter through a Littell Straightening Machine. Coil stock comes out of a Littell Straightener flat, with curvature removed. Equipped with variable speed transmissions, Littell Straighteners are easily adjusted to meet a wide range of speed requirements. Thirteen medium and heavy duty models straighten coil stock of all standard widths and thickness.

WRITE FOR CATALOG

F. J. LITTELL MACHINE CO.
ROLL FEEDS • DIAL FEEDS • STRAIGHTENING MACHINES • REELS • AIR BLAST VALVES
4169 N. RAVENSWOOD AVE. • CHICAGO 13, ILL.

For more details circle NED-8917 on enclosed inquiry slip

SAFEWAY . . . a new light weight chain hoist

Designed to keep pace with today's demands for greater efficiency in materials handling, this new Wright hoist is light in weight, high speed, compact, strong, easy to service, long lived. Capacities from ½ to 4 tons. Load chains of steel—heat treated—proof-tested—have high wearing qualities and high safety factor against possible impact loads. Load wheel reversible. Weston type brake resistant to high temperatures; cold, wet and dusty atmosphere. Send for bulletin DH-164.

WRIGHT HOIST DIVISION
American Chain & Cable
York, Pa.

For more details circle NED-8918 on enclosed inquiry slip

DEFLATING BAGS WITH VACUUM

Vacuum producers used to exhaust air from bags containing dynamotors; then packages are heat-sealed and enclosed in rugged wooden boxes. This packaging combats corrosion on equipment and silica gel in packages absorbs moisture.

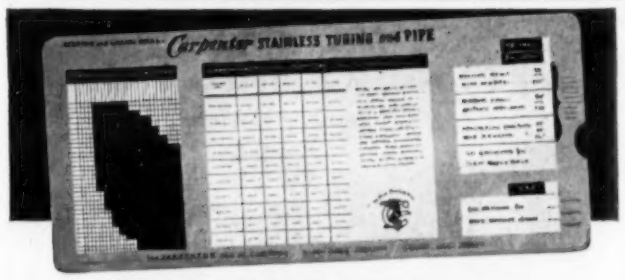
Hot water bags and other rubber goods are cleaned and deflated just before shipment.

Spencer Vacuum is also used to convey materials to or from freight cars, and in the packaging and shipping rooms.

356-T

150 USES FOR VACUUM . . . ASK FOR BULLETIN
THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD

For more details circle NED-8919 on enclosed inquiry slip

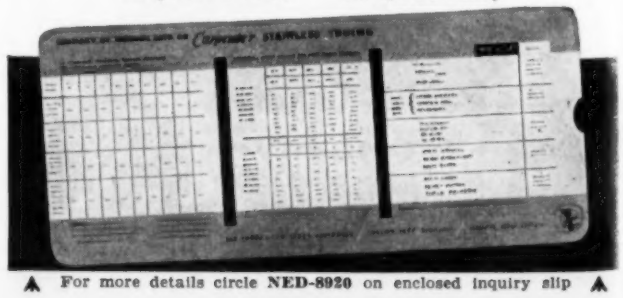


NEW SLIDE CHART on *Carpenter* Stainless Tubing & Pipe gives you

- Recommended Bending Radii and Coil Diameters for tubing and pipe from ⅜" to 5".
- Physical Constants, standard sizes and pressure data.

A note on your company letterhead will start this useful Carpenter Stainless Tubing Slide Chart on its way to you.

THE CARPENTER STEEL COMPANY
Alloy Tube Division Union, New Jersey



For more details circle NED-8920 on enclosed inquiry slip

SPEED PRODUCTION WITH

10-DAY DELIVERY

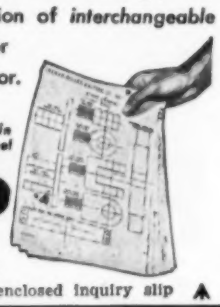
SPEED DESIGN WORK WITH

FREE TEMPLATES

SAVE INSTALLATION SPACE WITH

O-M CYLINDERS

Ortman-Miller cylinders for air, hydraulic and water applications are available in the full range from 1½" to 8" bores on *ten-day delivery!* Add this to the other advantages of space saving and simplicity of design (no tie-rods, no bulky end caps). All machined steel (no castings) and bearing bronze. Complete selection of *interchangeable* mounting devices. Write today for details and services of your distributor.



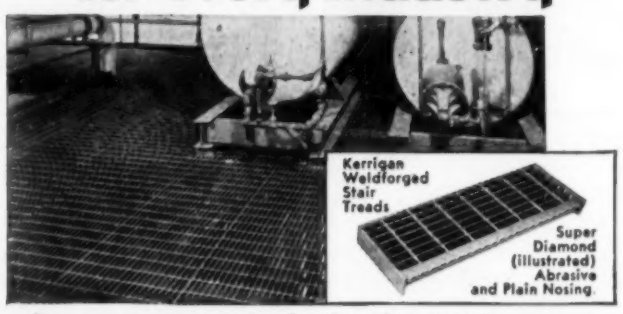
And . . . write today for free complete set of templates in one-half and full scales. Precision drawn to save your time!

ORTMAN-MILLER

MACHINE CO., INC.
1222-4 150th Street, Hammond, Indiana

For more details circle NED-8921 on enclosed inquiry slip

A SAFER, OPEN STEEL STRONGER FLOOR for every industry



You get an extra margin of safety with Kerrigan Weldforged steel flooring and stair treads. Continuous spiral cross bars, slightly above bearing bars and alternating right and left, leave no slick spots. Cross bars are Weldforged into bearing bars to form a one-piece unit of great strength.

For safety, strength, maximum light and ventilation, easy installation and maintenance, always specify Kerrigan Weldforged grating and stair treads. Its uses are many, indoors and out—open flooring, stair treads, sidewalk doors, catwalks, subway grating . . . to name only a few.

Send today for latest catalog — Write Dep't. 21

Weldforged GRATING DIVISION

KERRIGAN IRON WORKS, INC.
NASHVILLE, TENNESSEE
GENERAL SALES OFFICE, 274 MADISON AVE., N.Y.C.

For more details circle NED-8922 on enclosed inquiry slip

Jacketed Pumps

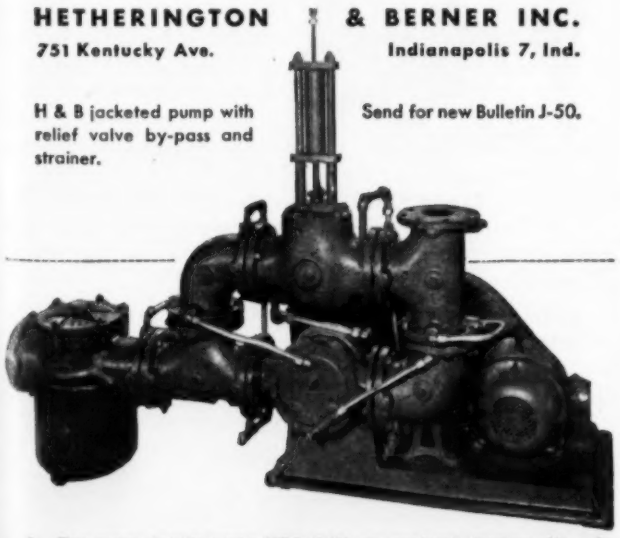
for handling viscous materials

Pumps for H & B Jacketed Systems are made especially for us to fit the flanges of H & B jacketed fittings. These pumps are engineered to provide maximum efficiency in handling viscous materials. H & B fittings are designed with a double wall forming an all-over jacket, completely insulating the interior line, with no dead spots or unprotected places.

HETHERINGTON & BERNER INC.
751 Kentucky Ave. Indianapolis 7, Ind.

H & B jacketed pump with relief valve by-pass and strainer.

Send for new Bulletin J-50.



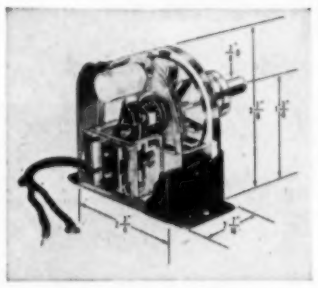
For more details circle NED-8923 on enclosed inquiry slip

TURBINE BLOWERS
for high pressures and temperatures

Operating on steam pressures up to 600 psi and temperatures up to 750° F, these steel turbine blowers have been modernized by incorporating fan impellers of true airfoil design and streamlined air entry. They do not require water cooling since bearings and lubrication system are automatically air cooled. Available in capacities up to 70,000 cfm or for static pressures to 20 in. of water, they can be bolted directly to front windbox for oil burner applications. Designed for capacity regulation through speed variation, units can be furnished also for vertical down discharge or for cementing into brickwork. Made by **L. J. Wing Mfg. Co.,** Vreeland Mills Rd., Linden, N. J.

For more details circle NED-8924 on enclosed inquiry slip

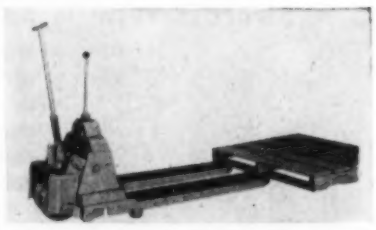
ROTARY SWITCH
is magnetic-coupled mercury type



Through use of fluid coupling from shaft to magnet-actuated disk and by magnetic coupling from disk to vane of mercury switch, this rotary switch offers several control possibilities. It will indicate running or stopping of a drive shaft, will signal the direction of rotation and can impulse electric counters for number of rotations of shaft. Switch operates at any speed from 2 to 2000 rpm, and sealed-in-glass mercury actuator is rated ½-amp at 125-v ac. Exposed metal parts are stainless steel, internal housing is Plexiglas, and rotating members operate on ball bearings. Several contact arrangements are offered. Distributed by **Walworth Controls Co.,** 777 New Britain Ave., Rocky Hill, Conn.

For more details circle NED-8925 on enclosed inquiry slip

PALLET LIFT TRUCK
features retractable wheels

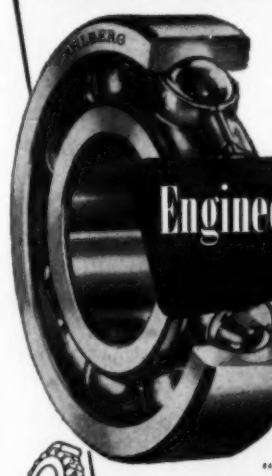


This aluminum alloy Load-Lift pallet truck employs wheels that automatically retract when forks are in lowered position. It is supported on two front wheels and two auxiliary wheels on short wheel base, has short turning radius and can lift wherever a man can stand. Rear wheels are 1 in. above floor and enter and leave pallet without interference or damage to bottom boards. When lifting handle is operated, load wheels are brought down to floor and auxiliary wheels are raised. Made by **Market Forge Co.,** 54 Garvey St., Everett 49, Mass.

For more details circle NED-8926 on enclosed inquiry slip

AHLBERG

PRECISION ANTI-FRICTION PRODUCTS



Engineered *for Super Service*

Once you try Ahlberg bearings we believe you'll decide your dollars can't buy better performance than these fine bearings give. Here's why: If you were to micro-analyze any Ahlberg ball bearing, you would find . . . balls that are accurate to .000025" in sphericity, matched in sets to .000025" "generated" raceways that assure true race curvature for full load capacity and perfectly matched ball paths . . . chrome alloy electric furnace steel that is meticulously heat-treated for maximum toughness without brittleness. Complete engineering assistance and quotations without obligation.

AHLBERG BEARING COMPANY
3025 W. 47th St., Chicago 32, Ill.
Precision Craftsmen Since 1908

AHLBERG BALL BEARINGS • ROLLER BEARINGS • THRUST BEARINGS AND BALL BEARING HOUSINGS

For more details circle NED-8927 on enclosed inquiry slip

AO One Piece ALL PLASTIC GOGGLE

AO's NEW INEXPENSIVE ALL PLASTIC GOGGLE

LIGHTWEIGHT
NON-FOGGING
WELL-VENTILATED
NON-FLAMMABLE
WELL-FITTING

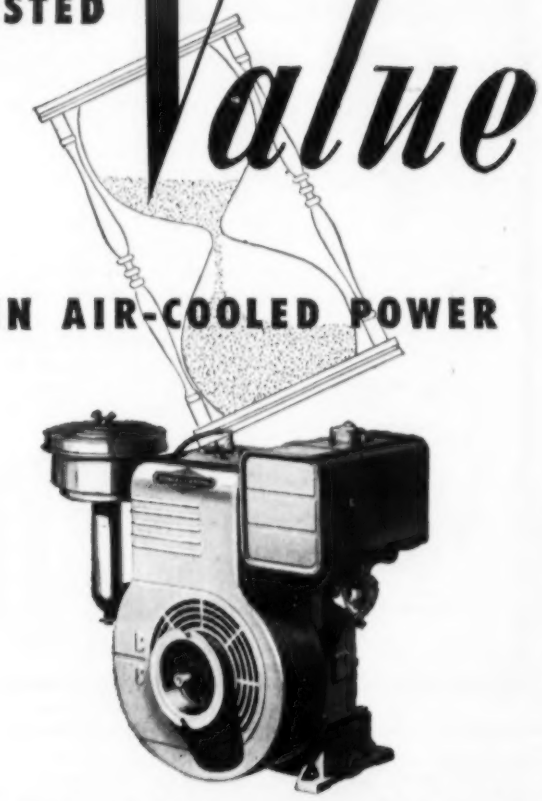
Made of impact resistant plastic, this one-piece goggle (AO479 Clear, AO480 Green) is "optically correct" and meets government specifications. It affords exceptional wide angle vision and can be worn over most standard types of personal glasses and most prescription spectacles and goggles. Recommended for protection against foreign particles striking from any direction on the following types of work: babbiting, chipping, cutting rivets, grinding, hand-tool operations, machine operations, spike driving and similar operations. Your nearest AO Safety Products Representative can supply you.

American Optical SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

For more details circle NED-8928 on enclosed inquiry slip

TIME-TESTED *Value* IN AIR-COOLED POWER



You are sure of the very best in engine value and performance when you insist on Briggs & Stratton—the best-known name in single-cylinder, 4-cycle, air-cooled engines. The wide acceptance of Briggs & Stratton engines for dependable performance has been created by an engineering and manufacturing experience record of more than 32 years, acquired in the building of more than 4 ¾ million engines.

BRIGGS & STRATTON CORP.
Milwaukee 1, Wis., U. S. A.

World Wide FACTORY SUPERVISED SERVICE — Flywheel Power FOR INDUSTRIAL CONSTRUCTION RAILROAD AND FARM EQUIPMENT

4 CYCLE BRIGGS & STRATTON GASOLINE ENGINES

In the automotive field Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

For more details circle NED-8929 on enclosed inquiry slip

ACCURACY TO .0001"

FOR TOOL ROOM AND PRODUCTION

FOR AS LITTLE AS $117.50

◀ Finishing small wood pattern at 45,000 R. P. M. with the new PRECISE SUPER 40.

▲ PRECISE SUPER 50 grinding die section in Compound Universal Mount on Bridgeport Mill.

IN PRECISE MOUNTS ON LATHES AND OTHER MACHINE TOOLS, PRECISE GRINDER-MILLERS WITH ¼ H.P. AND SPEEDS FROM 20,000 TO 45,000 R.P.M. DO THE WORK OF SINGLE-PURPOSE MACHINES COSTING 100 TIMES AS MUCH!

VERSATILITY. For cylindrical, internal, external and form grinding; for milling with H. S. steel or tungsten carbide midget mills; for micro-finishing and polishing. Use on wood, glass, rubber, plastics, or any metal including the hardest alloy steel.

DURABILITY. All metal housing, rigid PRECISE quill, lubricant-sealed, micro-precision bearings. ¼ H. P. AC-DC motor (115 volts) is protected by replaceable fusetrons.

ATTACHABLE COOLFLEX SHAFT (optional). Quickly attached for bench work and handtool applications. Same speeds, same precision quill as in PRECISE GRINDER-MILLERS.

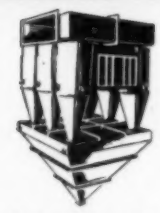
Write FOR NEW CATALOG

PRECISE PRODUCTS CO., 1346 Clark St., Racine, Wis.

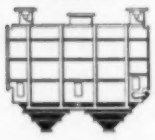
PRECISE GRINDER-MILLERS

▲ For more details circle NED-8932 on enclosed inquiry slip ▲

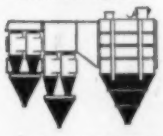
buell KNOWS DUST RECOVERY



Buell (van Tongeren) Cyclone



Buell 'SF' Electric Precipitator



Combination Cyclone-Precipitator Unit

WHENEVER industrial engineers discuss valuable dust recovery, Buell is the big name mentioned. For Buell offers knowledge and capabilities in dust recovery second to none. Only Buell Precipitator recovers ultra-fine dust with "Stedi-flow" dust fall—continuous cycle rapping that means constant peak efficiency. Buell large diameter cyclones do not plug, require next to no maintenance. Complete details on both types of equipment are available. Buell Engineering Co., Suite 5032, 70 Pine St., New York 5, N. Y.

buell

Engineered Efficiency in **Dust Recovery**

▲ For more details circle NED-8933 on enclosed inquiry slip ▲

SCREWS

Machine, Wood, Cap, Lag, Set, Knurled and Thumb Screws

Brass, Bronzes, Aluminum, Monel, Stainless Steels

Large stocks ready for immediate delivery from distributors and warehouses in principal cities.

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The H. M. Harper Company,
8212 Lehigh Ave.
Morton Grove, Ill.

Please send your condensed catalog.

Name.....

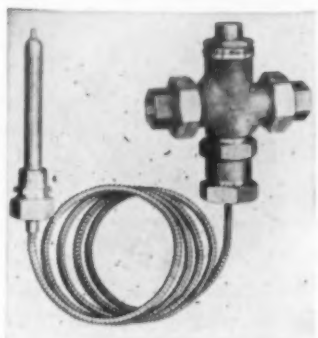
Company.....

Address.....

City.....Zone.....State.....

▲ For more details circle NED-8934 on enclosed inquiry slip ▲

TEMPERATURE CONTROL VALVE available in ½, ¾ and 1-in. sizes



Applicable to any process involving heating or cooling by means of water, oil, steam or other fluids, improved 150E Sterlco temperature control valve can be obtained in either direct-acting or reverse-acting type. It is self-contained unit consisting of compact bellows-packed valve with stainless steel trim and Monel bellows, capillary tube and thermostat bulb. Flow through valve is modulated automatically in accordance with temperature at bulb, and constant temperature adjustable over wide range can be maintained at all times. In direct-acting style, valve closes as bulb temperature rises, and in reverse-acting type, valve opens as bulb temperature rises. Valve has maximum pressure rating of 125 psi. Made by **Sterling, Inc.**, Industrial Control Div., 3720 N. Holton St., Milwaukee 12, Wis.

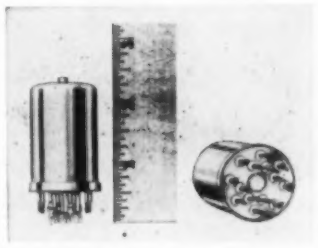
▲ For more details circle NED-8935 on enclosed inquiry slip ▲

DRIKING FOUNTAIN stainless steel unit is insulated

Constructed to meet all Public Health and sanitary plumbing codes, Oasis model SF-145 stainless steel drinking fountain has concealed plumbing which is packed in rock wool insulation to prevent condensation and dripping. Incorporating filler outlet in addition to bubbler, unit is chip-proof and requires little maintenance. Light in weight and easily installed, fountain is supplied with 1¼-in. waste trap and shut-off valve. Made by **Ebco Mfg. Co.**, 411 W. Town St., Columbus 8, O.

▲ For more details circle NED-8936 on enclosed inquiry slip ▲

MINIATURE RELAY aircraft type is hermetically sealed



Built to withstand shocks up to 50-g and to operate in temperatures ranging from −65 to 200° C, Diamond H relay is 4-pole double-throw type. Pressure-filled and sealed with dry inert gas, unit weighs 3.5 oz and has 1.5-cu in. displacement. It can be supplied with many variations as to mounting and terminal arrangements, voltage, amperage, number of poles and temperature range. Made by **Hart Mfg. Co.**, Dept. N, 110 Bartholomew Ave., Hartford, Conn.

▲ For more details circle NED-8937 on enclosed inquiry slip ▲

TWO-JOB TOOLING ON ONE MULTIPRESS

Index table "skip-station" feature permits double-duty tooling, faster assembly work

A press with holding fixtures for two different staking jobs! No down-time for tooling changes! Higher efficiency for both operator and press.

Here's the story! A 12-station Denison Index Table is tooled at *every other station* with holding fixtures for one assembly. Alternate stations are tooled for the other assembly. Two quick-change punches thread into the press ram.

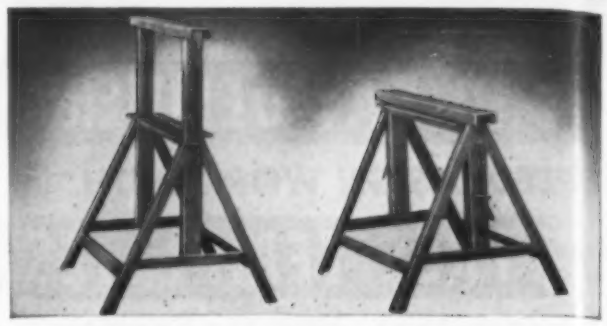
Skip-station control cams cause the table to "hurdle" every other station. Production can be switched to either job quickly, by simply moving the cams from one group of stations to the other.

Indexing Tables and the Skip-Station Accessory are only two of many standard, job-speeding attachments Multipress offers in addition to fast, quiet, oil-smooth accuracy. Capacities from one ton up through 35 tons. Manual or automatic controls. Check the advantages of Multipress. Write today.

DENISON HydrOIlics

The DENISON Engineering Co.
1151 Dublin Rd., Columbus 16, O.

▲ For more details circle NED-8938 on enclosed inquiry slip ▲



EVERY PLANT CAN USE ADJUSTABLE STEEL HORSES

They are the "work horses" in every plant or shop . . . more than pay for themselves, and are never idle because of the many uses their ready adjustability will easily serve:

SPOT WELDING TABLES	SCAFFOLDING
FABRICATION SUPPORTS	CONVEYOR SUPPORTS
LAYOUT WORK	MAINTENANCE WORK
BENCHES	And many other uses

MODELS FOR HEAVY OR LIGHT WORK

Standard length 36". Low Height 24"; Extended Height 42". Adjustable at 1½" intervals. Held in position by steel lock pins. All units portable. Painted one coat chrome yellow.

IMMEDIATE DELIVERY
Write for full information

Bruno HANDLING EQUIPMENT

BRUMMELER STEEL PRODUCTS CORPORATION
1411 Ionia Ave. S. W., Grand Rapids, Michigan

▲ For more details circle NED-8939 on enclosed inquiry slip ▲

Compare for *results!* Compare for *price!*

and you will choose the GREEN ENGRAVER

The Green En-graver offers great speed and convenience.

Quickly cuts up to four lines of letters from 3/64" to 1" on curved or flat surfaces whether made of metal, plastics or wood . . . operates by merely tracing master copy—*anyone* can do an expert job. Special attachments and engineering service available for production work. Just the thing for radio, electronic apparatus and instrument manufacturers. Write today for details.

For *quality* engraving on

• Panels • Scales • Name Plates
• Lenses • Molds • Dials • Instruments

. . . also does routing, profiling and three dimensional modeling.

GREEN GREEN INSTRUMENT CO.
375 Putnam Ave. Cambridge, Mass.

▲ For more details circle NED-8940 on enclosed inquiry slip ▲

For Modern Wiring Systems.....

JEFFERSON

Dry Type POWER CIRCUIT Transformers

The use of power circuit transformers is increasing rapidly because higher voltage main circuits mean greater use of these transformers to step down voltage for lighting, portable equipment, controls and machinery.

Jefferson Power Circuit Transformers are of the Dry Type—require no special vaults or cabinets. They may be mounted on post, walls, or directly on machine tools. Capacities range from 50VA to 15000VA.

Jefferson Power Circuit Transformers provide the dependability that assures efficiency in supplying 115/230 volt current whenever desired from the higher voltage circuit.

Send for Bulletin 501-15

JEFFERSON ELECTRIC COMPANY
BELLWOOD, ILLINOIS
In Canada: Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.

▲ For more deatils circle NED-8941 on enclosed inquiry slip ▲

THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling — Saves Die Costs Saves on Expensive Presses

The illustration at the left shows just a few pieces produced on our famous Multiform Bender-Cutter. This efficient machine is useful in all lines of trade.

ALSO BUILT IN LARGER SIZES

No. 5 Air Model

FIVE-IN-ONE-TOOL
IT BENDS FLAT AND TUBULAR STOCK INTO ANY SHAPE. CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. MYRTLE & PITCHER STS. KALAMAZOO, MICHIGAN

▲ For more details circle **NED-8942** on enclosed inquiry slip ▲

MANY INDUSTRIAL ROLL PROBLEMS are solved by using

SHAF-TITE* ROLLS

Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.

SEND FOR NEW CATALOG NO. 48
Most complete publication of its kind

Industrial Roll Division
RODNEY HUNT MACHINE CO.
73 Maple Street, Orange, Mass.

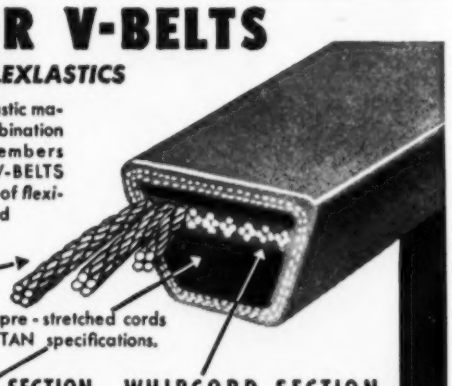
*Reg. U.S. Pat. Off.

▲ For more details circle **NED-8943** on enclosed inquiry slip ▲

CONDOR V-BELTS

made with FLEXLASTICS

FLEXLASTICS — elastic materials used in combination with Strength Members make CONDOR V-BELTS with highest degree of *flexibility, efficiency* and *lasting service.*



CORD
Strands of strong, pre-stretched cords made to MANHATTAN specifications.

COMPRESSION SECTION
... tough, firm FLEXLASTICS compression section, furnishes side-wall contact. FLEXLASTICS in body resists fatigue, reduces internal friction. Body is wrapped with closely woven fabric to resist wear, yet permit *easy flexing.*

WHIPCORD SECTION
... backbone of CONDOR V-BELTS . . . carries the load. Imbedded in strong, tenacious, heat-dissipating FLEXLASTICS to produce a homogeneous, inseparable unit with maximum strength, flexibility, durability and *extreme lack of stretch.*

8 POINTS of BALANCE

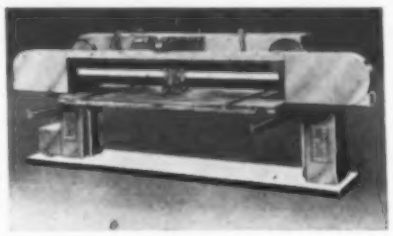
1. Wide margin of strength
2. Minimum inelastic stretch
3. Uniform flexibility
4. Maximum resistance to structural breakdown
5. Smooth running
6. Maximum traction
7. High resistance to side wear
8. Correct lateral reinforcement

Keep Ahead with Manhattan

RAYBESTOS-MANHATTAN, INC.
MANHATTAN RUBBER DIVISION, PASSAIC, NEW JERSEY

▲ For more details circle **NED-8944** on enclosed inquiry slip ▲

HYDRAULIC-STROKE SANDER uses pushbutton control of stroke



Driven by 7½-hp electric motor and equipped with large hydraulic pump, improved model No. 610 Hydra-Stroke sander has sufficient power for continuous heavy-duty sanding without kick-outs from overheating. Sanding pad carriage travels up to 90 strokes per minute on 8-ft stroke, 100 strokes per minute on 6-ft stroke and proportionately faster on shorter strokes. Speed of stroke is changed by turning hydraulic flow control dial, and through pushbutton control of length of stroke, setting up time is reduced. Pushbuttons located in front of operator also start and stop belt motor, raise or lower table and start or stop motion of sanding pad. Each can be operated without stopping any other movement of sander. Made by **Wysong & Miles Co.**, 631 Fulton St., Greensboro, N. C.

▲ For more details circle **NED-8945** on enclosed inquiry slip ▲

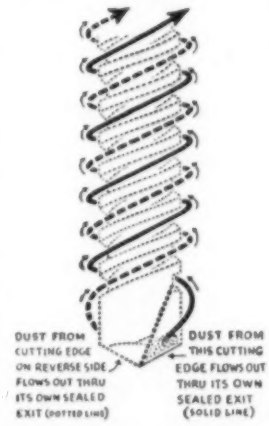
LIGHTWEIGHT RIVET GUN for installing explosive rivets

Typical applications for this lightweight electric explosive-rivet gun include manufacture of airplanes, radios, heating and ventilating ducts and electrical appliances as well as prefabrication of metal panels, doors and trim. It is particularly suitable for blind riveting operations as it does not require use of hammer or bucking bar. Gun tips of nichrome steel are welded to bronze base, and handle consists of two-piece molded phenolic in which is located off-on switch for easy manipulation. Made by **Ripley Co.**, 437 Factory St., Middletown, Conn.

▲ For more details circle **NED-8946** on enclosed inquiry slip ▲

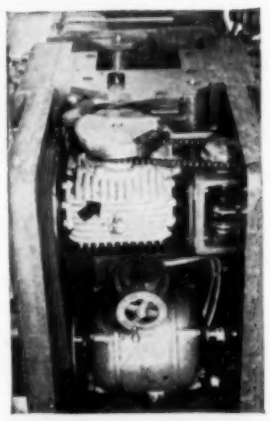
CARBIDE-TIPPED DRILL BITS available in up to 36-in. lengths

Obtainable in from 3/16 to 1-in. diameters, these extra-long Cyclo-Twist double-spiral fluted masonry drill bits are supplied in 20, 28 and 36-in. lengths. Two spiral flutes run from both cutting edges to shank end. Drill body is same diameter as carbide. This construction assures positive expulsion of dust as tool drills. It also eliminates need of removing drill bit to clean out hole to promote speed with which holes can be drilled. Made by **New England Carbide Tool Co.**, 54 Brookline St., Cambridge 39, Mass.



▲ For more details circle **NED-8947** on enclosed inquiry slip ▲

Compact Standard Reducers Cut Cost of Machine Drives



Made possible by the high load carrying capacity and extreme compactness of double enveloping Cone-Drive gearing, the use of standard stock Cone-Drive reducers instead of built-in gearing does away with special gear designing and bearing calculations, plus the necessary machining of castings, assembling of gears, shafts, bearings, etc.

Another way in which Cone-Drive Gears give you a lower machine drive cost per horsepower.

It will cost you nothing to find out how much simpler and less costly you can make your machine drives. How about doing it today? Write

CONE-DRIVE GEARS
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
Division Michigan Tool Company
7171 E. McNichols Road • Detroit 12, Michigan

▲ For more details circle **NED-8948** on enclosed inquiry slip ▲

STRONGER THAN GIBRALTAR

EMERITE FLOORING

The flooring that contains Natural Emery Stone (shown in the foreground) — the hardest mineral in the world, excepting the diamond only! Designed for industries which have despaired of ever finding an adequate flooring material. Permanent, economical, unbelievably strong! Investigate today!

WRITE FOR INFORMATIVE LITERATURE TO SALES DEPT.

FLASH-STONE COMPANY, INC.
ERIE AND PULASKI AVES., PHILA. 40, PA.

▲ For more details circle **NED-8949** on enclosed inquiry slip ▲

Progress MEANS SAVINGS FOR YOU

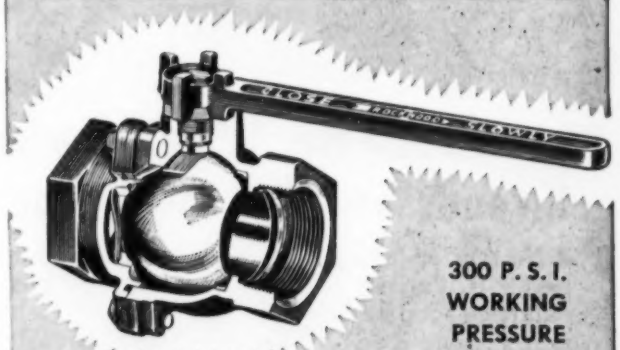
Back in 1938, the President of our Company packed his invention (The International Retractable Anvil Staple Machine), in a trailer, and "beat a path" to the doors of potential users. After watching their *filled* cartons being Stapled *from the outside, tops and bottoms simultaneously,* it didn't take them long to interpret the savings that this new miracle machine could effect—in time, labor, space and prestige.

Well, sir, today you'll find International Retractable Anvil Staple Machines being used in virtually every industry in the land. If you haven't looked into them yourself, you're missing a bet—and also losing money!

INTERNATIONAL STAPLE AND MACHINE COMPANY
HAVERTOWN 2, PA.
DISTRIBUTORS IN PRINCIPAL CITIES

▲ For more details circle **NED-8950** on enclosed inquiry slip ▲

OUT-PERFORMS THEM ALL!



300 P. S. I. WORKING PRESSURE

ROCKWOOD Ball VALVES

have already made, in various types of industries, an outstanding record for longer, dependable, efficient performance.

The full *round* flow, leak proof service, quick opening and closing and no maintenance features make Rockwood Ball Valves *your best valve buy* on the market. These remarkable engineering features will give efficient and economical operations thru years of everyday rugged use. Together, they help increase your profits and reduce your maintenance cost. Available in all pipe sizes from ½" to 4".

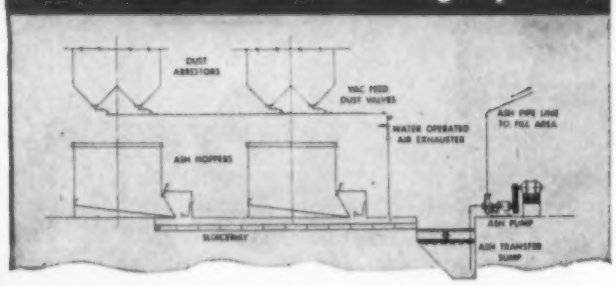
Write for illustrated folder V-4.

ROCKWOOD SPRINKLER CO.
44 HARLOW STREET WORCESTER 5, MASS.

▲ For more details circle **NED-8951** on enclosed inquiry slip ▲

Need Large Capacity Ash-Handling?

CHECK WITH BEAUMONT ON A HYDRAULIC Ash-Handling System



A Beaumont HYDRAULIC System: is particularly suited for high capacity ash-handling; handles wet ash or dry, molten slag and large clinkers; fits any type of power plant arrangement; is completely enclosed, preventing dust or gas from escaping to the boiler room; and can be operated by one man on a part time basis.

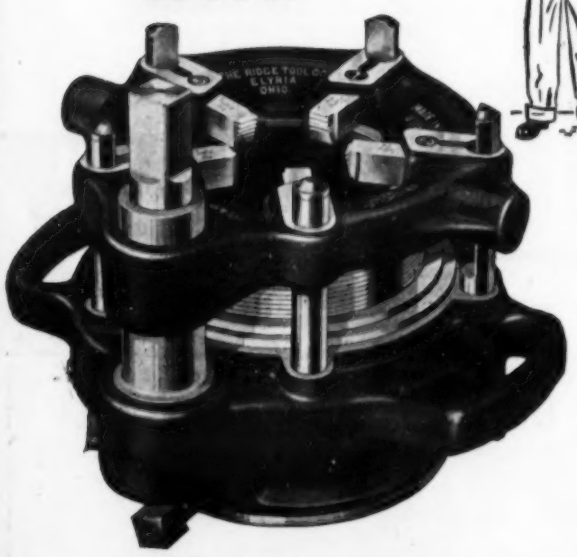
Beaumont's Ash-Handling Division is competently staffed to give you expert recommendations on all types of ash-handling systems . . . and to provide and install the proper equipment to suit your particular requirements. Write today for the Beaumont brochure: "Answers to Your Ash-Handling Questions".

Beaumont BIRCH COMPANY
1514 RACE STREET • PHILA. 2, PA.
DESIGNERS • MANUFACTURERS • ERECTORS • BULK MATERIAL HANDLING SYSTEMS

For more details circle NED-8952 on enclosed inquiry slip

A Geared Pipe Threader

THAT'S EASY TO WORK WITH



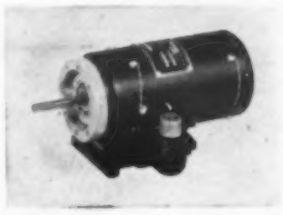
RIDGID No. 4P cuts perfect threads on 2½" to 4" pipe

● No matter how good a threader is, it's a lot better if it's easy to handle. RIDGID 4P has balanced loop handles so you can easily pick it up and put it on pipe—even when it's greasy and you're tired. Mistake proof workholder sets to size *before* you put it on pipe, one screw to tighten, no bushings. 4 sets of 5 high-speed steel chaser dies give clean accurate threads on 2½," 3," 3½" and 4" pipe. Ratchet handle furnished — RIDGID Universal Drive Shaft and Power Drive available for power-threading. For perfect threads, easily, order the RIDGID 4P from your Supply House.

RIDGID
WORK-SAVER PIPE TOOLS
THE RIDGE TOOL CO. • ELYRIA, OHIO

For more details circle NED-8953 on enclosed inquiry slip

DIRECT-CURRENT MOTORS
precision units are lightweight



Available in continuous-duty models with rated outputs to 0.5-hp and in intermittent duty models with rated outputs to 2 hp, these corrosion-resistant 26-v dc motors are designed to operate over ambient temperature range from −65 to 165° F. Variety of optional accessories offered facilitates matching of motor to specific application.

These accessories includes Fastop clutch which gives positioning control of friction-load type devices, electromagnetic brake for positioning control applications which require extreme holding torque or impose large load inertias on motor, load and temperature-sensitive thermal protector, flange or base-type mounting and radio noise filter. Made by **Lear, Inc.**, Electro-Mechanical Div., 110 Ionia Ave. N.W., Grand Rapids 2, Mich.

For more details circle NED-8954 on enclosed inquiry slip

SUCTION CLEANER
employs dry air for cooling motor

Of quiet type for heavy-duty service, model BP multistage suction cleaner draws dry atmospheric air into motor housing entirely independent of and sealed off from suction air. Arrangement minimizes danger of corrosion or electrical breakdown due to moisture-saturated cooling air. Motor has continuous-duty rating of 1 hp, develops maximum water lift of 56 in. and has maximum temperature rise of 38° C on continuous operation. Made by **National Super Service Co.**, 1949 N. Twelfth St., Toledo, O.

For more details circle NED-8955 on enclosed inquiry slip

COATED CANVAS GLOVES
in knit wrist and gauntlet styles

Available in three different styles, these Stanzoil neoprene-coated industrial canvas gloves can be obtained also in Hot 'n Cold types for protection against extreme temperatures. They have non-slip grip, inserted thumb design which moves seam out of wear area and Preflex palm which helps prevent wear caused by bunching. Fingers are curved for hand comfort and efficiency. Linings are of 8-oz canton flannel throughout. Styles available are Heavy-Duty, Extra-Duty type coated red as warning signal of hand danger and Super-Duty which is neoprene-impregnated for extreme abrasion resistance. Made by **Pioneer Rubber Co.**, 634 Tiffin Rd., Willard, O.

For more details circle NED-8956 on enclosed inquiry slip

*ALL these GRC tiny zinc die castings were produced in **one** automatic operation!*

What a saving of time and money for you!

We can offer zinc die castings *as small as* .000004 of a lb. (250,000 to the lb.) **Smallness Unlimited**

GRC's method of die casting **really small** parts has opened up new fields in designs, products and economies for hundreds of manufacturers. Our exclusive, high-speed mass production facilities turn out simple or intricate parts automatically—completely trimmed ready for use—100,000 pieces to many millions. Discover GRC's small parts possibilities for yourself—

Write Today for Bulletin and Samples.

GRIES REPRODUCER CORP.
82 Willow Ave., New York 54, MOtt Haven 9-2476

Maximum Wt: ½ oz. Maximum Lgth: 2 in. Smallness Unlimited

For more details circle NED-8957 on enclosed inquiry slip

Says the Superintendent of a large Process Industries Plant

"Speaking for our men,
HERE'S WHY WE LIKE HOMESTEAD LEVER-SEALD VALVES—

- They Operate Easily
- Give full flow almost instantly
- They're Stick-Proof
- They last 3 to 4 times longer than other valves"

● This plant's experience is typical of that of thousands of other users, and tells why Homestead Lever-Seald Valves have been first choice for more than 18 years for services where corrosive fluids, slurries, abrasives, or extremes of temperature or pressure cause ordinary valves to fail.

Homestead Lever-Seald Valves are stick-proof; require less maintenance; and the means for easy turning under all conditions, is built right into the valve. We can furnish them in stainless steel, steel, iron, brass or alloys to meet your needs; sizes 1½" to 10"; for pressures from vacuum to 1500 lbs.

Write for valve reference book No. 39-3. No obligation.

HOMESTEAD VALVE MANUFACTURING CO.
"Serving Since 1892"
P. O. BOX 84 CORAOPOLIS, PA.

For more details circle NED-8958 on enclosed inquiry slip

Carter

CARTER RIGID WHEELS & TIRES

Carter rigid Wheels and 30" & 36" Quick-Change Tires are for heavy-duty high-speed operations. Tires won't throw even at 1800 r.p.m. Changed in 10 min. 20 years service on best machines. Carter products universally accepted as standard equipment by leading bandsaw manufacturers.

Write—
For free illustrated folder!

CARTER PRODUCTS COMPANY INC.
69 Mount Vernon Ave., N. W., Grand Rapids 4, Michigan

For more details circle NED-8959 on enclosed inquiry slip

NP PRE-ENGINEERED *Pneumatic* **DOOR OPERATORS**

- Speed material handling
- Isolate dust and fumes
- Isolate fire hazards
- Reduce cost of air conditioning and heat

Powered by the air engine that operates the car doors of the world's subways

Write for bulletin DC-102

NATIONAL PNEUMATIC CO., INC.
Boston • Graybar Bldg., New York • Chicago

For more details circle NED-8960 on enclosed inquiry slip

STOP DUSTS

. . . from Any Size Grinder

IMMEDIATELY . . . With DUSTKOP

22 Different Dustkops . . . Standard, Pretested.

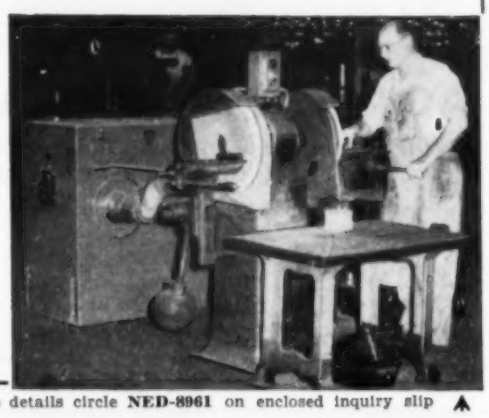
300 cfm to 9,000 cfm

For all kinds of dusts.

Ask for Catalog 605-2. Describe dust problem for recommendation—No obligation.

Age: Detroit Co., Ann Arbor, Michigan

That's a Model #1150; takes all the dust from two 18" wheels.



For more details circle **NED-8961** on enclosed inquiry slip

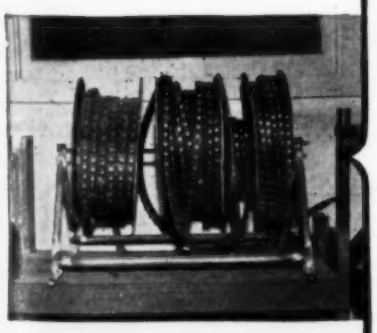
WORLD-WIDE SALES AND SERVICE OF HYSTER TRACTOR EQUIPMENT BY MORE THAN 400 "CATERPILLAR" DEALERS

"Caterpillar" dealers around the globe are Hyster tractor equipment sales *and service* stations. . . . They *sell* the right tool for the job. Their factory-trained mechanics *service* the equipment when required. They supply genuine Hyster parts from well equipped stocks.

Hyster has made tractor tools for use with "Caterpillar" track-type tractors for more than 20 years; will continue to design and build quality products for the world's toughest work assignments.

HYSTER® COMPANY
2906 N.E. Clackamas, Portland 8, Ore.
1806 North Adams, Peoria 1, Ill.

For more details circle **NED-8962** on enclosed inquiry slip



THESE 4 REELS OF VEELOS ARE

all the v-belt stock

ONE BIG PLANT REQUIRES

1 REEL OF A
1 REEL OF B
2 REELS OF C

• Just 4 reels of Veelos—the adjustable v-belt—take care of 75 v-belt drives in this plant. Soon all 200 drives will be Veelos equipped! This plant is standardizing on Veelos for good reasons . . .

- *It saves money* on v-belt inventory.
- *It saves money* when belts are replaced.
- *It saves money* because Veelos lasts longer.
- *It saves money* because Veelos gives full, vibrationless, power delivery.

Have you the facts at your fingertips? *Send for your copy of the Veelos Data Book.*

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

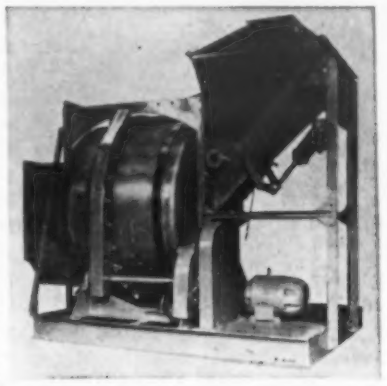
VEELOS THE LINK V-BELT

ADJUSTABLE TO ANY LENGTH
ADAPTABLE TO ANY DRIVE

Made in all widths in three types: regular, oil-proof and static conducting. Also double V in A and B. Packaged on reels in 100-foot lengths. Sales engineers in principal cities; over 350 distributors throughout the country. Veelos is known as VEELINK outside the United States.

For more details circle **NED-8963** on enclosed inquiry slip

ROTARY BATCH MIXER offers protection from dust hazards

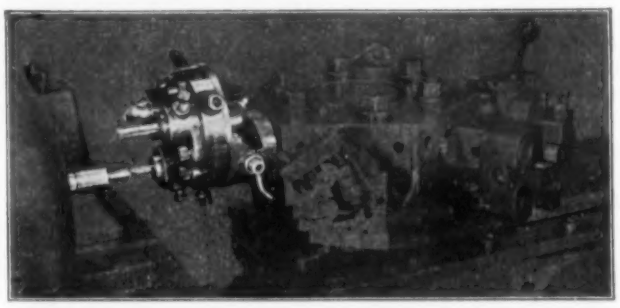


In order to eliminate dust during discharge of batch, this Ransome rotary batch mixer is furnished with dustproof housing enclosing discharge chute. Recommended applications include batch mixing of glass, fertilizer, refractories, food and drugs, enamel frits, candy and chemicals. Unit employs mixing action that carries material up both sides where it falls in two fan-like formations to bottom where it is swished from side to side and then is carried up again and operation repeated. To eliminate dust during mixing period, sealing disk attached to inner side of discharge chute completely covers this opening while mixing. Sealing joint packing revolves with drum on charging side with packing kept in place by retaining ring accurately bolted to true center of drum with adjustment provision for keeping packing tight. Made by **Worthington Pump & Machinery Corp.**, 401 Worthington Ave., Dunellen, N. J.

For more details circle **NED-8964** on enclosed inquiry slip

REVOLVING TURRET HEAD ADAPTER affords three-position indexing

Basic set-ups on turret lathes or hand screw machines are simplified with this Rev-Del revolving turret head adapter. Set-ups requiring stop, center and chamfer



can be left in machine permanently. Spot facing, drilling, counterboring, reaming, tapping and other tools can be adapted easily. Alignment, positioning and concentricity are assured because of precision ground and lapped construction. Device provides three-position head mounts in single turret tool position. It is available in 1, 1¼ and 1½-in. straight shank and in Morse taper shank sizes. Distributed by **Gilmor Engineering Co.**, Dept. NED, 29 E. Madison St., Chicago 2, Ill.

For more details circle **NED-8965** on enclosed inquiry slip

DO YOU KNOW? Two or more colors can be applied in single coat when MultaColor enamel is used. Evenly distributed colors produce an attractive broken surface effect. Applicable with dip or spray technique, enamel is available in 16 color combinations and in flat, semigloss and gloss. Developed by United Lacquer Mfg. Corp., 1005 W. Elizabeth Ave., Linden, N. J.

For more details circle **NED-8966** on enclosed inquiry slip

New plant at Willimantic, Conn. . . . one of the most modern operations in the screw industry.

. . . as production steps up in NEW WILLIMANTIC PLANT

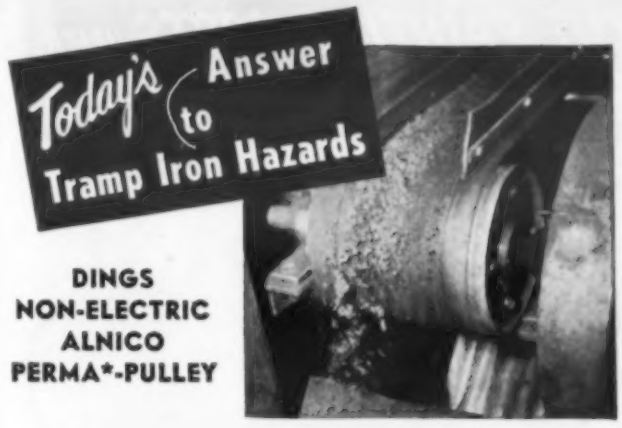
American's pipelines are being pumped full of ample supplies of all types of Phillips and slotted fasteners. Industrial supply distributors and hardware jobbers everywhere are set to serve you *now*.

For American's new high-production plant in Willimantic is geared up to meet all demands promptly and efficiently. And this production is augmented by the American plant at Norristown, while distribution is kept on a "delivery now" basis by warehouse stocks in Norristown and Chicago.

AMERICAN SCREW COMPANY
Plants at Willimantic, Conn. and Norristown, Pa.

AMERICAN SCREWS

For more details circle **NED-8967** on enclosed inquiry slip



DINGS NON-ELECTRIC ALNICO PERMA*-PULLEY

REMOVING damaging tramp iron the Perma-Pulley way brings you a combination of advantages unmatched by any other tramp iron separator:

- **Automatic** — unaffected by power failures, requires no attention. Just install it and forget it.
- **No Maintenance** — no wiring, no electrical accessories to require repairs or replacement.
- **No Operating Cost** — pays for itself in power savings.
- ***Magnetic Permanence Guaranteed*** for the life of the installation.
- **Powerful** — Tremendous surface strength means positive tramp iron removal.

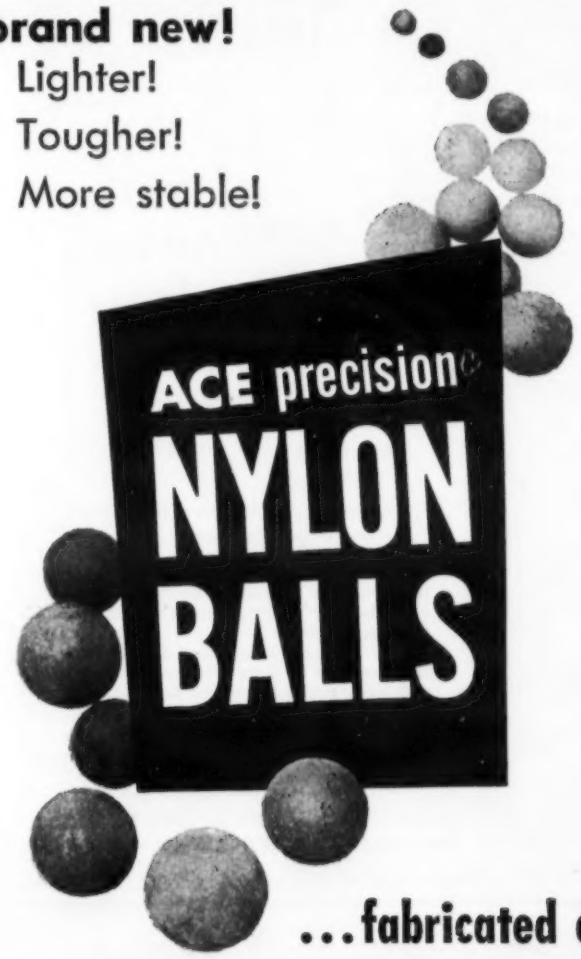
Simple to install, lightweight, made of the highest grade Alnico, the Perma-Pulley is backed by over 50 years' experience in the design and manufacture of magnetic separators by Dings for all industry. *Write for catalog.*

DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Avenue
Milwaukee 14, Wis.

Dings "HIGH INTENSITY"
*Registered Trade Mark

For more details circle **NED-8968** on enclosed inquiry slip

brand new!
Lighter!
Tougher!
More stable!



. . . fabricated of

DuPont NYLON

FM #10001 to close tolerances

SIZES: ⅛" TO ¾". TOLERANCES ±.001.

ACE is first in the world to give you mass-produced, close tolerance balls of DuPont Nylon FM #10001. These are tough at low temperature . . . abrasion-resistant—have form stability at high temperatures . . . are light in weight . . . resistant to chemicals. Use them on valves, valve components, specialized anti-friction bearings, detents and mechanical checks and many other industrial applications.

LET OUR ENGINEERS ADVISE YOU

Write today for samples and bulletin.

Complete facilities for fabricating plastic parts for all industries. Estimates submitted promptly upon receipt of your blueprints or specifications.

ACE HIGH QUALITY TRADE MARK

ACE PLASTIC COMPANY
Precision Plastic Fabricators
91-28 VAN WYCK BLVD. • JAMAICA 2, N. Y.

For more details circle **NED-8969** on enclosed inquiry slip

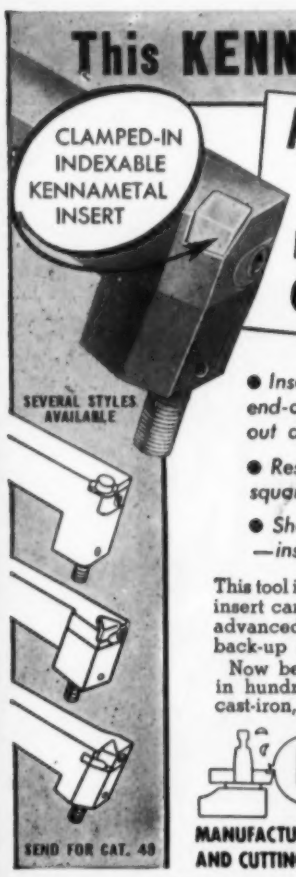
CUT PAINTING COSTS WITH PRESSURE QUEEN

The saving in materials and labor on first painting job will pay for this complete 4-cylinder portable outfit. Your maintenance men can wheel it wherever work is to be done, from ground level, ladders or rigging. Handles any paint or spray solution. Absolutely no pulsation; no stops to build-up pressure. The outfit includes the compressor mounted as shown; all hose connections, 3-gallon material tank, spray gun and 1/2 h.p. motor or gas engine. Write for details.

THE CAMPBELL-HAUSFELD CO.
193 RAILROAD AVENUE HARRISON, OHIO

For more details circle NED-8972 on enclosed inquiry slip

This KENNAMATIC TOOL has 8 long-lasting KENNAMETAL Cutting Edges!



- *Insert can be indexed, turned end-over-end, or changed without adjusting tool holder setting.*
- *Resharpening merely requires squaring off both ends of insert.*
- *Shank can be used indefinitely —insert is replaceable.*

This tool is thermal-strain-free. Its Kennametal insert can be sharpened scores of times and advanced to cutting position by means of back-up screw.

Now being used with outstanding results, in hundreds of shops, for machining steel, cast-iron, and non-ferrous materials.

KENNAMETAL Inc.
Latrobe, Pa.
MANUFACTURERS OF SUPERIOR CEMENTED CARBIDES AND CUTTING TOOLS THAT INCREASE PRODUCTIVITY

For more details circle NED-8973 on enclosed inquiry slip

A New Management-Labor Tool

PENCO-CONDITIONED LOCKER ROOMS

LEARN how Penco-Conditioning improves employee morale, cooperation, efficiency. Send for new 7-color Penco folder showing latest ideas on modern locker-restrooms for industry, service businesses and institutions.

PENCO STEEL LOCKERS, SHELVING, CABINETS

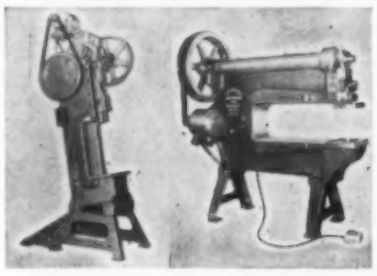
Send FOR FREE FOLDER

PENN METAL Corporation of Penna.
82 Oregon Ave., Phila. 48, Pa.
Gentlemen: *Please send me new folder* No. SE-1

Name_____ Title_____
Company_____
Street_____
City_____ Zone____ State_____

For more details circle NED-8974 on enclosed inquiry slip

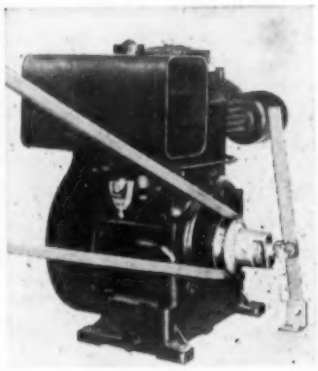
SPECIAL-PURPOSE PRESSES in deep-throat and long-stroke types



Accessibility to moving parts and to dies for quick changes are features of these two special-purpose presses. Model 201-S long-stroke press has effective stroke of 7 in. and throat clearance from bed to ways of 21 in. Column is tilted back for convenient operation. Back gear drive is powered by 1-hp motor. Model 10-M-32 press is designed for high production rates on wide variety of work where extra-deep throat capacity is required. It has flywheel type of drive from 1½-hp motor. Made by **Perkins Machine Co.**, 15 Perkins Ave., Warren, Mass.

For more details circle NED-8975 on enclosed inquiry slip

SHIFTING SLEEVE designed for V-belt clutch

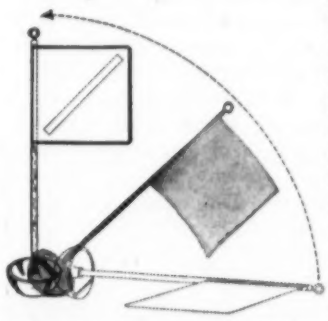


Developed for Ball-Lok V-belt clutches on motors or gasoline engines, this shifting sleeve simplifies installation and reduces misalignment and wear of shift lever. When installed, small central extension of clutch shifting ring is modified so that thrust and pull of clutch is borne by small bearing. Device can be actuated by either solenoid or air pressure. Installation of ball-thrust unit requires only fabrication of suitable fork handle of 3/16 x 3/4-in. strap stock which is drilled to receive swivel clamps. Made by **V-Belt Clutch Co.**, Cor. Elmwood & Western Ave., Los Angeles, Calif.

For more details circle NED-8976 on enclosed inquiry slip

DANGER FLAG STANDARD is easily set up and taken down

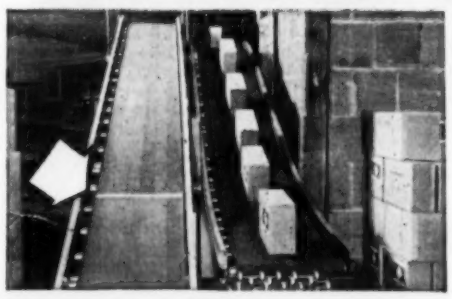
Consisting of 7-in. diameter cast-iron base, 13 x 13-in. red canvas flag mounted on 32-in. staff having non-rusting eye and ferrule at top, this Ipco Wind-pruf portable danger flag standard is suitable for many industrial uses. Base can be used in position shown or inverted. Flag is held spread by means of spring steel stay inserted diagonally in canvas pocket. Eye at top of unit is used when making up barriers on streets, around manholes or for industrial repairs. Unit requires small storage space, and flag and staff can be detached from base. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.



For more details circle NED-8977 on enclosed inquiry slip

ALLIGATOR®

CONVEYOR BELT LACING



Every Tooth A Vise*

in Long Continuous Lengths for Conveyor Belts . . . . .

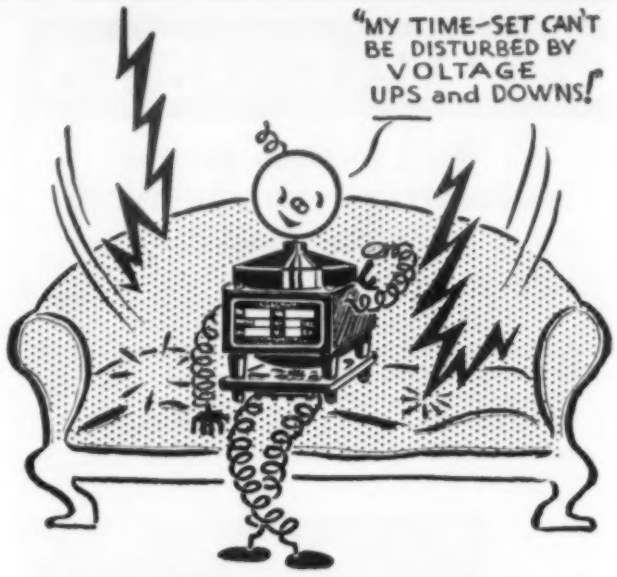
- ★ Excellent for Package Conveyors, Portable Loaders, Trenching and Ditching Machines, etc.
- ★ In canneries where corrosion or rust is a problem specify Alligator made of Monel.
- ★ For magnetic separators or anti-sparking specify Alligator made of Everdur.
- ★ Separable and smooth on both sides.
- ★ 12 sizes. For belts from 1/16" to 5/8" thick— and *any width.*

Order from Your Supply House. Ask for Bulletin A-60.

FLEXIBLE STEEL LACING CO. 4664 Lexington St., Chicago 44, Ill.

JUST A HAMMER TO APPLY IT

For more details circle NED-8978 on enclosed inquiry slip



AGASTAT TIME DELAY RELAY

Readily adjustable . . . flexible . . . instantaneously recycling . . . small, compact and easily mounted.

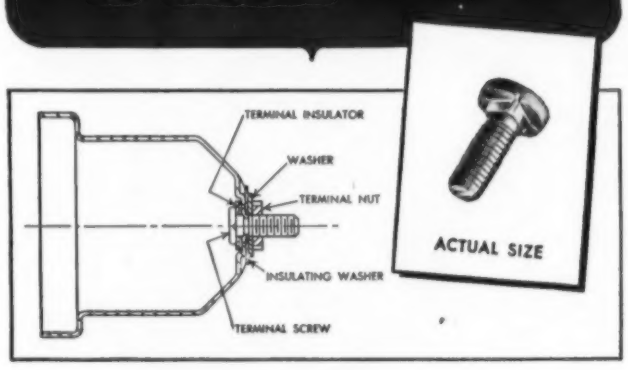
Literature and information without obligation.

AGA AIRPORT LIGHTING · AGA STIMSONITE REFLECTORS · AGA MARINE LIGHTING EQUIPMENT · AGA AGASTAT TIME DELAY RELAYS

AMERICAN GAS ACCUMULATOR COMPANY
1027 NEWARK AVENUE • ELIZABETH 3, N. J.

For more details circle NED-8979 on enclosed inquiry slip

TERMINAL USED AS A NOSE!



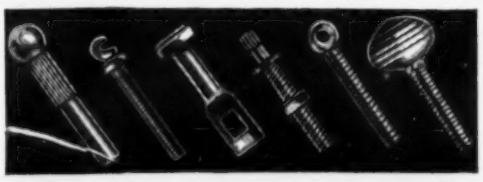
KING-SEELEY CORPORATION designed this Progressive-made terminal to permit the housing of its oil pressure unit to "breathe" — a feature that insures the presence of atmospheric conditions inside the housing and, consequently, accurate pressure registration.

Progressive was called in to make the terminal for two reasons. We have the engineering and production skills to make the part, in all its tricky detail, according to specification. And, secondly, we do a precise job at a cost that makes it worthwhile to do business with us.

We specialize in special fasteners. Use this specialization — you gain all ways.

WRITE FOR OUR CATALOG
IT MAY SAVE YOU MONEY

Other typical PROGRESSIVE *"Specials"*



QUALITY PROMCO BRAND

THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

SALES OFFICES: SAN FRANCISCO, LOS ANGELES, PORTLAND, DETROIT, PHILADELPHIA, CLEVELAND, SEATTLE, BOSTON, SYRACUSE, ST. LOUIS, CHICAGO.

For more details circle NED-8980 on enclosed inquiry slip

Plenty of Places...

Where this 3-in-1 Workhorse Will Save Time and Work

Table Top 26" x 43"

IMMEDIATE SHIPMENT

IT'S A WORK BENCH
A work bench on wheels, with a steel top that moves up and down—that's the Service "Liftable"

IT'S A TRUCK
Perfect for moving heavy dies, assemblies from one spot to another... saves lifting and carrying.

IT'S A LIFTER
Transfers heavy units from one table height to another merely by cranking the top up or down to any height from 28" to 42".

To move heavy pieces, dies, assemblies vertically from one level to another—and then horizontally from one place to another — use the Service LIFTABLE. Lowered, the top is 28" from floor . . . raised, it's 42". Capacity 2000 lbs. . . . chain and screw lifting mechanism...all welded construction...locks positively at any height . . . readily portable. Cut handling costs—put LIFTABLES in your plant.

Get Descriptive Circular—Write Today.

SERVICE CASTER & TRUCK CORP.

INDOORMILES Made EASIER and SAFER

Executive Offices: Albion, Michigan
Plants at Albion, Michigan and Somerville 43, Mass.
See your classified Telephone Directory for name of nearest Service Distributor

▲ For more details circle **NED-8981** on enclosed inquiry slip ▲

WELD

4 Ways Arcos Helps Solve Problems Welding: Stainless... Low Alloy High Tensile ... Non-Ferrous Metals

1. Most complete line . . . Standard electrodes, always available, to weld stainless and low alloy high tensile steels, monel, nickels and bronzes.

2. Help on welding procedure . . . Arcos research and engineering help goes beyond the metal itself. It answers fabricating problems such as dilution on clad welding, heat treatment, welding sequence and others.

3. Knowledge of weld performance . . . 20 years of pioneering experience in stainless and alloy welding to tell you weld performance under conditions of high and low temperatures, corrosion, cavitation, abrasion, pressure and others.

4. Special electrodes for critical service . . . Arcos research facilities and flexible production make this possible quickly and at low cost.

All standard sizes and types of Arcos electrodes are available from convenient distributor stocks.

ARCOS CORPORATION
1500 South Fiftieth St., Philadelphia 43, Pa.

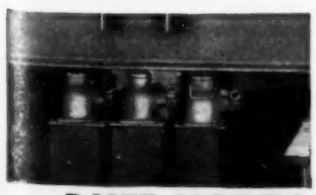
WITH ARCOS

Specialists in Stainless, Low Alloy and Non-Ferrous Electrodes

▲ For more details circle **NED-8982** on enclosed inquiry slip ▲

JUST 7 INCHES HIGH

THE DUFF-NORTON "Shorty" JACK
LIFTS HEAVY LOADS IN LOW HEIGHTS



Yes . . . the new "Shorty" Jack is just 7" high and weighs only 22 lbs.—yet it will lift heavy loads weighing up to 15 tons. Note the low height application at left in which 3 jacks were used.

Write today for Bulletin AD-10.H

DUFF-NORTON JACKS

THE DUFF-NORTON MANUFACTURING CO.
Main Plant and General Offices: PITTSBURGH 30, PA. Canadian Plant: TORONTO, ONT.

"The House that Jacks Built"

▲ For more details circle **NED-8983** on enclosed inquiry slip ▲

SAFETY GOGGLES
feature strength and light weight

Eye protection from flying particles is provided by F4100 Ful-Vue metal goggles. Design utilizes flat eyewire, light temples, perspiration-proof tubing over ear portions, long easily-adjustable guard arms supporting nose pads and double-braced bridge. Endpieces incorporate friction joint with wide bearing surfaces which minimize temple drop. Goggles are supplied in three standard eye sizes and five standard bridge sizes. Both 6-curve Super Armorplate clear or Calobar lenses in medium, dark or extradark shades are available. Side shields can be obtained in either noncorrosive perforated wire mesh or clear acetate, either perforated or nonperforated. Made by **American Optical Co.**, 1492 Mechanic St., Southbridge, Mass.

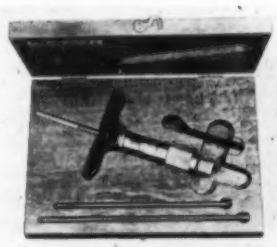
▲ For more details circle **NED-8984** on enclosed inquiry slip ▲

PORTABLE MASONRY SAW
cuts concrete and asphalt flooring

Any concrete or asphalt flooring can be cut for expansion joints, patchwork or repairs of plumbing, conduit and structural members with this portable masonry saw. It can be obtained in electric powered models C-15 and C-20 for general maintenance work or in 7½ and 13-hp gasoline powered models C-75 and C-130 designed for out-of-door repair. All models can be supplied with metal-bonded diamond blades suitable for sawing concrete with limestone, flint or granite aggregates. Features include floating three-point suspension that eliminates blade binding as saw is moved over rough surface, positive screw feed and streamlined design for ease of handling. Made by **Clipper Mfg. Co.**, Concrete Saw Div., Warwick at 28th St., Kansas City 8, Mo.

▲ For more details circle **NED-8985** on enclosed inquiry slip ▲

MICROMETER DEPTH GAGE
graduated in 0.001-in. increments



Depth of holes, slots, projections or recesses is measured accurately with this micrometer depth gage. Choice of 2½, 3, 4 and 5-in. bases is offered in ranges of 0 to 3 in. and 0 to 6 in. Satin chrome finish resists rust, prevents glare and affords ease of reading. Precision ground micrometer screw is used, and depth range is selected by use of interchangeable rods. When desired, setting can be locked with lock nut. Made by **L. S. Starrett Co.**, Dept. ED, Athol, Mass.

▲ For more details circle **NED-8986** on enclosed inquiry slip ▲

For **HIGHEST ELECTRICAL & MECHANICAL** *Efficiency!*

New

JONES 2400 SERIES PLUGS & SOCKETS

Improved Socket Contacts. Four individual flexing surfaces. Positive contact over practically their entire length.

Both Plug and Socket Contacts mounted in recessed pockets greatly increasing leakage distance, INCREASING VOLTAGE RATING. Plug and Socket Contacts cadmium plated. Add to appearance of your equipment. Interchangeable with Jones 400 Series.

Ask for Catalog 17. Complete line Jones Plugs, Sockets, Terminal Strips.

P-2406-CCT
Plug — with cable clamp in top.

S-2406-SB
Socket with shallow bracket for flush mounting.

Jones

HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle **NED-8987** on enclosed inquiry slip ▲

Portable, High-capacity, High-voltage

Testing Units

G-E portable high-voltage test set, 60 cycles, 300 kva, 30,000/60,000 volts, 2300-volt supply, with 50 per cent exciting-current transformer and electrically operated oil circuit breaker.

For testing cables, generators, large motors, transformers, and other high-voltage equipment, a *portable* high-capacity testing unit provides convenience, speed, and accuracy.

Write General Electric for a proposition. Information on these points should be included: test and supply voltages, kva, material to be tested, type of test, and doorway clearances. A suitable unit utilizing standard components will be quoted. *Apparatus Dept., General Electric, Schenectady 5, N. Y.*

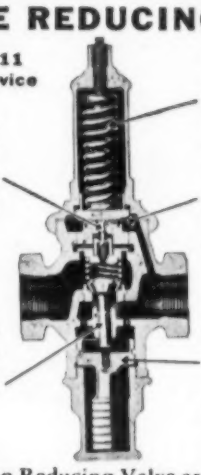
GENERAL ELECTRIC
401-87

▲ For more details circle **NED-8988** on enclosed inquiry slip ▲

5 Quality Features

THAT ASSURE LOW COST PRESSURE REDUCING SERVICE

MASON NO. 11 for Steam Service



1. Carefully calibrated diaphragm spring insures accuracy throughout entire control range.

2. Stainless steel auxiliary valve unit, hardened and ground pilot valve — eliminates sticking and wire drawing.

3. Phosphor bronze diaphragm.

4. Special alloy stainless steel main valve, hardened and general, prevents steam cutting.

5. Bronze piston fitted with cast iron rings operates in ground and polished cylinder.

The No. 11 Mason Reducing Valve assures precise pressure control in all types of applications. Pilot operation assures fast, accurate response to controlled pressure variations. Initial pressure ranges up to 250 lbs. reduced to any desired pressure between 5 and 75 lbs. or 75 and 225 lbs. Bronze bodies, screwed connections in sizes ½" to 2". Iron bodies, 250 lb. flanges in sizes 2½" to 4". Maximum working pressure 250 lbs. @ 450°F.

Your local Mason-Neilan industrial distributor is ready to serve you from his stock

MASON-NEILAN REGULATOR COMPANY
1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

▲ For more details circle **NED-8989** on enclosed inquiry slip ▲

Production Picks Up when Synthane is the Specified Material

Synthane plastic laminates are easily worked on standard machinery. Turned, drilled, punched, sawed or milled parts may be inexpensively produced from Synthane. Synthane is light in weight, yet finished parts made from it have the hardness, toughness, density, corrosion, abrasion and impact fatigue resistance to give peak performance and long life. Automatic screw machines and Synthane rods and tubes are an excellent combination for low cost, high speed production of smaller parts.

For information about Synthane and some suggestions about what it can do for you, clip and mail the coupon today.

TECHNICAL PLASTICS
SHEETS • RODS • TUBES
FABRICATED PARTS

SYNTHANE

MOLDED-LAMINATED
MOLDED-MACERATED

SYNTHANE CORPORATION
North East River Road, Oaks, Pa.

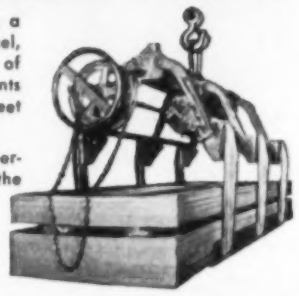
Please send me a copy of the complete Synthane catalog.

Name_____
Firm_____
Address_____
City_____ State_____

▲ For more details circle **NED-8990** on enclosed inquiry slip ▲

Wide or Narrow...

1 C-F LIFTER HANDLES THEM ALL



Whether your production requires a few or many widths of sheet steel, 1 C-F Lifter, with its wide range of jaw and carrying angle adjustments will probably meet all your sheet handling requirements.

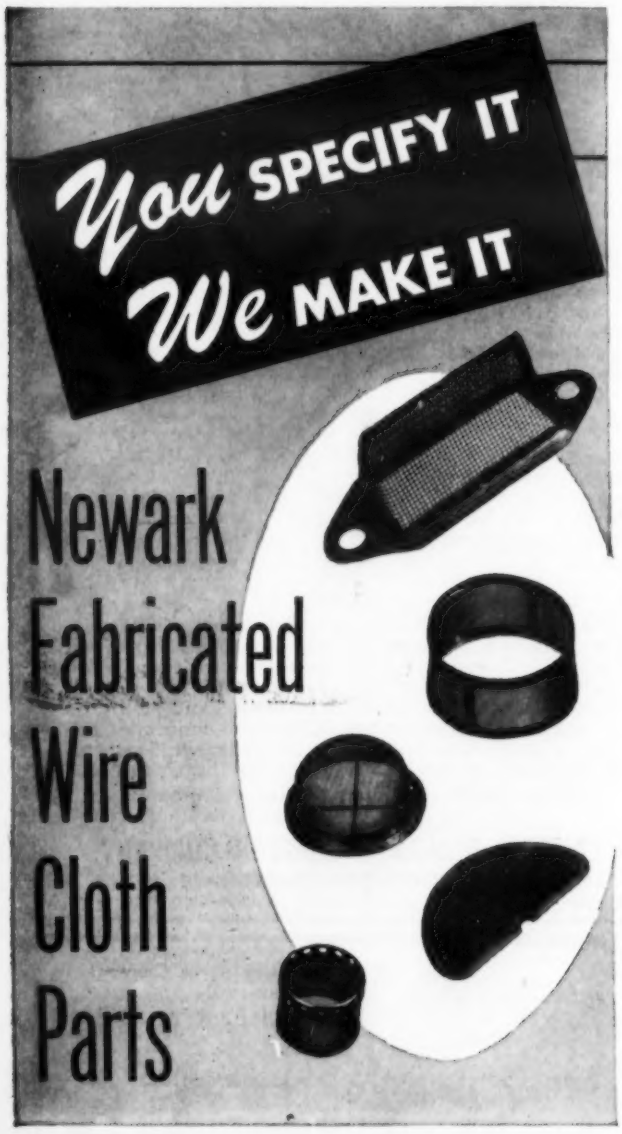
Adjustments are made by the operator in a few seconds, permitting the Lifter to shift from wide to narrow sizes almost instantly.

Because it can pick up, carry and unload more loads per hour, using less man and crane time than any other methods, a C-F Lifter will soon pay for itself.

Bulletin SL-25 gives you the complete story of C-F Lifter advantages to you. Ask for it today. There is no obligation.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

▲ For more details circle **NED-8991** on enclosed inquiry slip ▲



Have you a design or production problem involving parts fabricated from woven wire cloth? If you do, why not allow us to be your manufacturing division for such parts. We have a large department specializing in the fabrication and assembly of wire cloth parts in production quantities...we are equipped to manufacture everything from ventilating screens to fuel pump strainers.

We weave our own cloth and do all the necessary cutting, forming, welding, soldering, seaming, bending, edging and fitting. You get your parts complete, ready for quick assembly.

May we quote on your requirements?

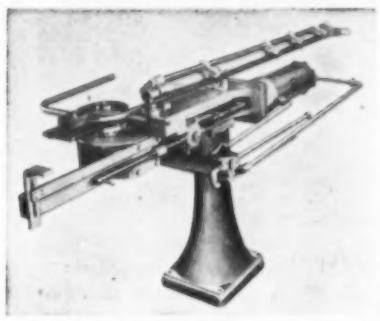
NEWARK for ACCURACY

12-NWC-7

Newark Wire Cloth COMPANY
351 VERONA AVENUE • NEWARK 4, NEW JERSEY

▲ For more details circle **NED-8992** on enclosed inquiry slip ▲

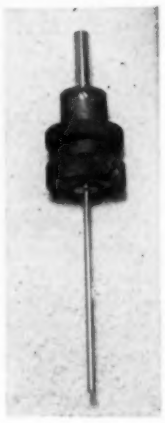
TUBE BENDING MACHINE
is powered by pneumatic cylinders



Fully automatic die and clamping head used in this improved Bend-Ex bender enables it to produce up to 1000 bends per hour on 1½-in. 16-gage steel tubing. As many as ten bends can be made in single tube of any diameter up to 1¼ in. For normal operation, machine requires compressed air at 80 psi. Interchangeable dies and guide rolls with radii up to 9½ in. can be employed to handle various sizes of round, square and rectangular tubing in lengths from 6 in. to 10 feet. Adjustable stops can be set to position bends and facilitate production work. Made by **Paul Machine Tool & Die Works,** Dept. S, 4600 S. Kedzie Ave., Chicago 32, Ill.

▲ For more details circle **NED-8993** on enclosed inquiry slip ▲

DEBURRING TOOLS
operate in any power spindle



Recommended for use where heavy burr-removing operations are encountered or for applications on tough steels, DS series deburring and chamfering tools are of small pilot size. Sizes available include types for 1/8, 5/32, 3/16 and 0.189-in. holes. Free-wheeling knurled sleeve is actuated by operator while spindle rotates to project cutting blade to working position and to retract it within pilot shaft. This enables cutter head to be brought into otherwise inaccessible areas of multi-walled parts. Cutter blade is fully and rigidly supported by pilot shaft to guard against shaft deflection. In its projected position blade is firmly locked in place by engagement of pin within slot in body of shaft. Made by **Nobur Mfg. Co.,** 717 N. Victory Blvd., Burbank, Calif.

▲ For more details circle **NED-8994** on enclosed inquiry slip ▲

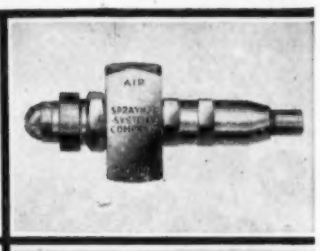
GEIGER COUNTER
self-contained unit is lightweight

Redesigned and improved Super Sniffer Geiger counter is sensitive to both gamma and beta radiation and has beta window to permit careful checking of ores. Added feature is neon blinker to indicate counts. Two flashlight batteries supply power for this instrument which weighs only 2 lb. Stainless steel case is fitted with belt clip and handle. Also provided is radioactive source for checking purposes. Made by **Nuclear Instrument & Chemical Corp.,** 647 N. Franklin St., Chicago 10, Ill.

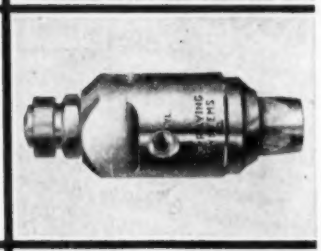
▲ For more details circle **NED-8995** on enclosed inquiry slip ▲

are you "up-to-date" on SPRAY NOZZLE developments . . . for example

✓ Spraying Systems Pneumatic Atomizing Nozzle with Cleanout Needle . . . spring loaded cleanout needle is open in normal position. When pushed into orifice, cleans out entire orifice passage. Write for Data Sheet 4198.



✓ Spraying Systems Pneumatic Atomizing Nozzle for Automatic Operation . . . provides intermittent operation. Typical use is automatic lubrication of molds . . . with lubricating operation indexed to press cycle. Write for Data Sheet 4547.



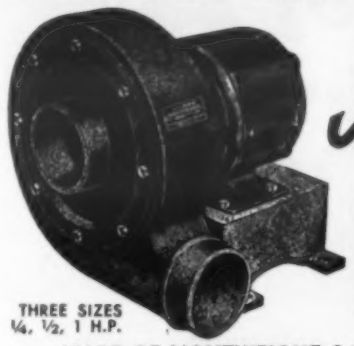
✓ Spraying Systems Pneumatic Atomizing Nozzle with Steam Jacket . . . for spraying liquids requiring above-room temperature. The nozzle is easily removed from the jacket. Write for Data Sheet 4610.

WRITE and tell us the details of what you want to accomplish in spraying . . . our engineering facilities are at your service. Also . . . do you have General Catalog No. 22?

SPRAYING SYSTEMS CO. 3211 RANDOLPH STREET BELLWOOD, ILLINOIS (Suburb of Chicago)

▲ For more details circle **NED-8996** on enclosed inquiry slip ▲

READY TO RUN—IMMEDIATE DELIVERY!



THREE SIZES ¼, ½, 1 H.P.

Sutton MOTOR DRIVEN PRESSURE BLOWERS

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY

CENTRIFUGAL TYPE designed to deliver an even, non-pulsating flow of air for blowing or exhausting. Universal as to rotation and discharge. Direction of discharge may be changed to any of eight 45 degree positions. • Housing, base, support, and impeller are constructed of cast aluminum alloy to reduce weight and increase strength. Straight wall construction reduces windage and increases efficiency. • Powered by standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor in choice of open or totally enclosed types. Three sizes: ¼, ½ and 1 H.P. with capacities from 100 to 800 cu. ft. per min. at static pressures from ½" to 6".

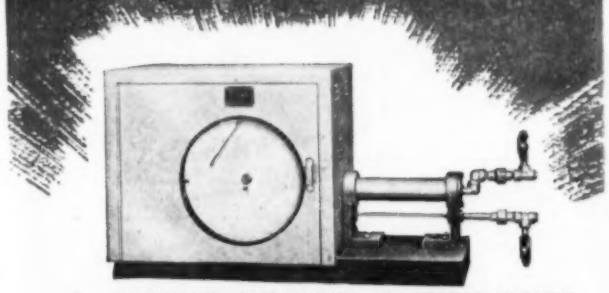
USED FOR removing dust from grinding, buffing and polishing equipment; for conveying cotton, wool, saw dust, shavings, etc.; for exhausting smoke fumes and vapor; to furnish blast for forges, furnaces, etc.; and for cooling and drying purposes.

WRITE FOR LITERATURE AND PRICES

Sutton Manufacturing Corp.
126 WEST WILSON AVE. NORFOLK, VA.

▲ For more details circle **NED-8997** on enclosed inquiry slip ▲

ARCCO ANUBIS LIQUID GRAVITOMETER



...for PIPELINES, REFINERIES, GASOLINE PLANTS

This ruggedly built instrument of laboratory accuracy is ideal for quick checking and for continuous recording of Specific Gravity of liquids under line pressure. Changes in Specific Gravity of sample are recorded with a very minimum of time lag. Foreign liquids and gases are automatically purged from sample. No moving joints or stuffing boxes to cause friction or leakage. Temperature corrected, this precision instrument is adaptable to high pressures. Hundreds are in daily use in plants and refineries of major companies. Also available as a controlling instrument. Send for bulletin No. 111A.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

Available for Early Delivery

SEND FOR BULLETIN No. 111-A

▲ For more details circle **NED-8998** on enclosed inquiry slip ▲

YOU CAN CUT COSTS ON LIGHT ASSEMBLY OPERATIONS *with this fast* Bellows AIR VISE

Built-in electrical or mechanical valve for automatic operation

VISE may be operated by hand or foot or may be synchronized to riveters, punch presses, arbor presses or other machines. Clamping pressure adjustable from 0 to 500 lbs. 4" soft steel false jaws. Jaw opening adjustable to 2¼".

DEPT. NED 1250

The Bellows Co.
AKRON, OHIO

Write for Bulletin 761

▲ For more details circle **NED-8999** on enclosed inquiry slip ▲

UNIVERSAL

EXPANDED METAL **FLOOR TRUCKS**

MODEL 4-A
Length 60", width 30", height 30".

- **Greater Economy**
- **Greater Utility**

Literature Mailed Promptly Upon Request

MODEL 4-B
Length 60", width 30", height 48".

Durable, highly maneuverable, economically priced. Designed to meet a wide range of material handling jobs. Rigid angle iron frame. Equipped with four 4" ball-bearing fiber casters—swivel casters centered at front and rear; rigid casters centered on each side. Model 4-B has hinged drop panel on side equipped with positive safety latches.

- Also other types of expanded metal containers in sizes and quantites to customer's specifications.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

▲ For more details circle **NED-9001** on enclosed inquiry slip ▲

No need to jam a Dart to get it tight. The true ball joint—with precision-ground bronze-to-bronze seats—always gives a snug fit without excessive wrenching. An important reason why Darts always tighten so easily—then uncouple easily for repeated use. And, in service or storage, the practically indestructible air refined malleable iron body and nut keep the seats safe from damage.

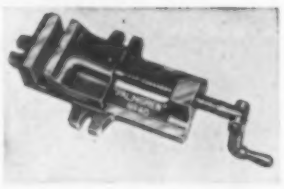
E. M. DART MFG. CO., Providence 5, R. I.

▲ For more details circle **NED-9002** on enclosed inquiry slip ▲

WILLSON PRODUCTS, INC., 219 WASHINGTON ST., READING, PA.

▲ For more details circle **NED-9003** on enclosed inquiry slip ▲

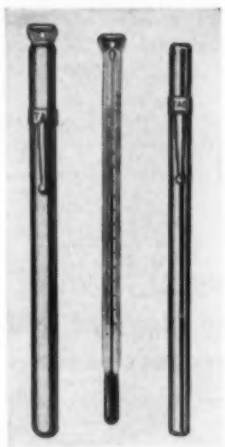
DRILL PRESS VISE
designed for general shop use



Suitable for quick easy setups on jobs that would otherwise require jigs and fixtures, model No. 40 Palmgren drill press vise facilitates many milling, drilling and grinding operations. Jaws are 3½ in. wide, open to 3½ in. and have 1⅝-in. depth. Movable jaw is grooved vertically for holding round work. Heavy steel adjusting screw has coarse pitch Acme thread for fast action, and swivel crank handle is provided for ease in turning when vise is mounted on machine table. Three bolt lugs are located on vise base to insure rigid mounting and secure locking on machine. Made by **Chicago Tool & Engineering Co.**, 8378 S. Chicago Ave., Chicago 17, Ill.

▲ For more details circle **NED-9004** on enclosed inquiry slip ▲

POCKET THERMOMETER
can be used with or without case



Usable either as armored or plain thermometer for temperatures between −30° and 120° F. Thermicator pocket-type instrument has ⅜-in. diameter and is 6 in. long. It consists of etched-stem glass thermometer and lightweight noncorroding protective case equipped with adjustable clip that allows instrument to be carried at any depth in coat, shirt or vest pocket. When in case, thermometer is gripped by spring pressure that prevents its slipping out unless deliberately removed. Indicating medium is ruby-red spirit; scale divisions are 2° over instrument range; and entire bore including expansion chamber is visible. Flared pinch-top prevents it from rolling on flat surfaces. Made by **Weston Electrical Instrument Corp.**, Tagliabue Instruments Div., Dept. 414, 614 Frelinghuysen Ave., Newark 5, N. J.

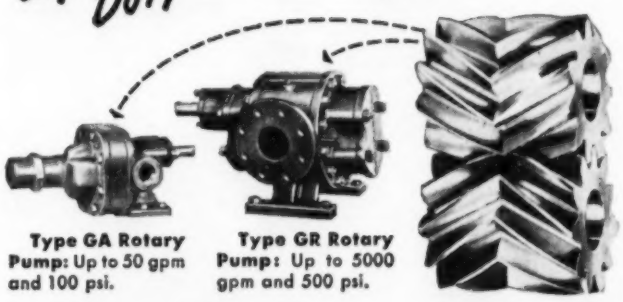
▲ For more details circle **NED-9005** on enclosed inquiry slip ▲

AIR LINE FILTER
has handy moisture drain cock

Available in ¼, ⅜ and ½-in. standard pipe sizes, model No. 3084 air line filter features filtering element composed of hundreds of laminations of fine material. Filtering area is ample to provide full flow of air even after long periods of use. When placed in air line ahead of any air control mechanism or air operated tools, it protects them by removing dirt, rust and moisture from line. Trapped moisture is drained readily. Made by **Scovill Mfg. Co.**, A Schrader's Son Div., 478 Vanderbilt Ave., Brooklyn 17, N. Y.

▲ For more details circle **NED-9006** on enclosed inquiry slip ▲

Light Duty or Heavy Duty



Type GA Rotary Pump: Up to 50 gpm and 100 psi.

Type GR Rotary Pump: Up to 5000 gpm and 500 psi.

Double Helical Herringbone Gear Rotors: Quiet and efficient; extra large wearing surfaces; no axial thrust; no trapping of liquid.

. . . The Same Sturdy Construction!

Both the light duty Type GA and the heavy duty Type GR incorporate the rugged herringbone rotors that operate so quietly and efficiently...combining with the whole advanced Worthington design for smoothest performance and longest, most economical rotary pump service. For further facts proving *there's more worth in Worthington*, write to *Worthington Pump and Machinery Corporation, Reciprocating Pump Division, Harrison, New Jersey.*

WORTHINGTON

P-0-3

▲ For more details circle **NED-9007** on enclosed inquiry slip ▲

NICHOLSON MAKES

FREEZE-PROOF
Steam Traps
for Every Plant Use

Because they drain completely when cold, these four types of Nicholson steam traps are positively freeze-proof. Can be freely installed outdoors. Universally recommended for use in lines which need not be in continuous use during cold weather, because they are freeze-proof and because their 2 to 6 times average drainage capacity results in minimum heat-up time. The non-air-binding feature of Nicholson traps also notably facilitates steam transfer in severe weather. Size ¼" to 2"; press. to 225 lbs.

BULLETIN 450

W. H. NICHOLSON & CO. 162 OREGON ST. WILKES BARRE, PA.

Valves ★ Traps ★ Steam Specialties

▲ For more details circle **NED-9008** on enclosed inquiry slip ▲

With rare exceptions on commerical and industrial installations

Ordinary Fuses and Breakers Do Not Protect Except Against Short-Circuits But---

Fusetron DUAL-ELEMENT Fuses
Provide 10 Point Protection

Count 'em

1* Protect against short-circuits.
2 Protect against needless blows caused by harmless overloads.
3 Protect against needless blows caused by excessive heating — lesser resistance results in cooler operation.
4 Provide thermal protection — for panels and switches against damage from heating due to poor contact.
5 Protect motors against burnout from overloading.
6 Protect motors against burnout due to single phasing.
7 Give DOUBLE burnout protection to large motors — without extra cost.
8 Make protection of small motors simple and inexpensive.
9 Protect against waste of space and money — permit use of proper size switches and panels.
10 Protect coils, transformers and solenoids against burnout.

* Fusetron fuses have high interrupting capacity as shown by tests of the Electrical Testing Laboratories of New York City.

DON'T RISK LOSSES. One needless shutdown.. One lost motor . . . One destroyed switch or panel. One burned out solenoid . . . may cost you far more than replacing every ordinary fuse with a FUSETRON dual-element fuse.

BUSSMANN MFG. CO.,
Division of McGraw Electric Co.,
University at Jefferson St. Louis 7, Mo.

Fusetron DUAL-ELEMENT Fuses

▲ For more details circle **NED-9009** on enclosed inquiry slip ▲

It says "STOP" to Solids— "GO" to Fluids

Here is a BETTER Strainer to "police your pipelines"

• FIRST—*The Screen*, a high-grade, woven Monel wire basket that catches solids—lets condensate, oil or other fluids flow freely.

• SECOND—*Finish*. Cadmium plated for protection against corrosion and for better appearance.

• THIRD—*Easily Cleaned*. Blow-off bushing made for easy removal. Bushing and Screen come out together. Screen automatically aligns on reassembly.

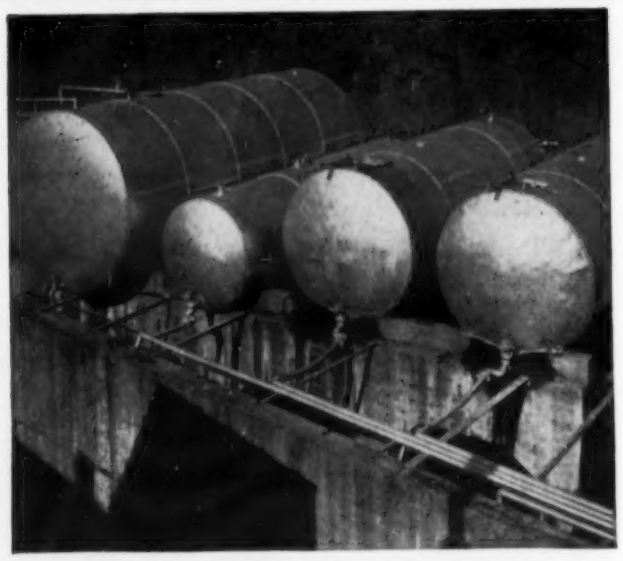
• THOUSANDS IN SERVICE—Sold by over 150 Mill Supply Houses. 6 sizes from ½" to 2" for pressures up to 600 lb. Reasonably priced.

See your supply house or write for Bulletin S-201.

YARNALL-WARING COMPANY
131 Mermaid Ave., PHILADELPHIA 18, PA.

YARWAY STRAINERS

For more details circle NED-9010 on enclosed inquiry slip



READ HOW TO PROTECT TANKS AND THEIR CONTENTS*

Free Book Full of Ideas

THIS NEW FREE BOOK tells how you can use the right aluminum paint to save evaporation losses and reduce expansion of liquids, because of aluminum's high reflectivity. It's packed with a wealth of ideas about using the right aluminum paint in the right places to protect against moisture and fumes and brighten up your plant.

ALCOA does not make paint, but we have prepared this book to help you select the right aluminum paints, made by leading paint manufacturers from Alcoa pigments. Included are application instructions to insure maximum service; coverage tables, facts on correct types of ready-mixed aluminum paints for metal, masonry, wood—inside or out—and for heated surfaces. A copy is yours for the asking.

Fill out the coupon below and attach it to your letterhead; we'll send your free copy by return mail.

MAIL THIS COUPON TODAY

ALUMINUM COMPANY OF AMERICA,
Paint Service Bureau, 1735M Gulf Bldg., Pittsburgh 19, Pennsylvania.
Please rush me free copy of "Painting with Aluminum".
Name (please print) _____
Address _____
City _____ State _____
We plan to paint the following: _____

Look for this shield on aluminum paints made by many paint manufacturers using ALCOA PIGMENTS.
*The RIGHT aluminum paint for this job is ALUMINUM METAL & MASONRY PAINT.
ALCOA ALBRON

For more details circle NED-9011 on enclosed inquiry slip

DOUBLE ROTARY TABLET PRESSES produce wide range of tablet sizes and plastic preforms at high speeds

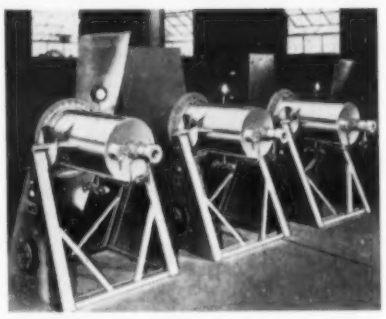
Incorporating 27 punches and dies and two stamping stations, No. 227 double rotary tablet press exerts maximum pressure of 5000 psi. Production capacity is 1575 tablets per minute, and maximum size of tablets is ¾-in. cell depth and diameter of ½-in. Uniformly accurate tablet weight is assured by micrometer cell adjustment.

Rotary head is completely guarded to prevent tablet material from sifting down into drive mechanism. Variable speed drive permits operating speed to be adjusted to suit different types of tablet material. Power is transmitted to head through Twin Disc clutch from 2-hp 1800-rpm motor.

Also available is No. 233 press which delivers 1930 tablets per minute. Maximum tablet diameter is 7/16-in. with cell depth of ¾-in. Made by **Arthur Colton Co.**, 3400 E. Lafayette Ave., Detroit 7, Mich.

For more details circle NED-9012 on enclosed inquiry slip

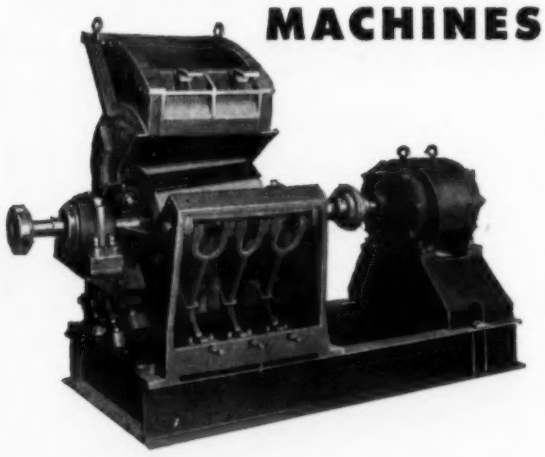
VACUUM SINTERING FURNACE has molybdenum heating element and 3300° F maximum temperature range



Dual-tube Pereco model MO-224 molybdenum-vacuum electric furnace has neutral to reducing atmosphere that is pure enough to sinter chromium without oxidation. Steel case maintains vacuum of 30-in. Hg indefinitely. Molybdenum heating element is readily removable and compensates for heat gradient at both ends of tube. Working area is 2-in. ID and 28 in. long, with 18-in. controlled temperature length. Furnace can be obtained with sight tubes on one or both ends. Pyrex or quartz sight lens can be removed from 10-in. vestibule or sight tube for mounting thermocouples or other equipment. Both sight tube and face of furnace are water cooled. Cylindrical unit can be rotated and locked for operation in either horizontal or vertical position. Power input is 6-kw 220-v 60-cycle single-phase current. Connections are provided for atmosphere, vacuum and water. Transformer, ammeter, vacuum gage and valves are standard, while atmosphere train and vacuum pump are optional equipment. Made by **Pereny Equipment Co.**, Chambers & Pereco Rd., Columbus 12, O.

For more details circle NED-9013 on enclosed inquiry slip

M & M REDUCTION MACHINES



These efficient machines will rapidly reduce otherwise unusable waste products to uniform size for easy handling. The product may be used as a fuel for municipal incinerators and power plants. M & M Reduction Machines are the most practical method of garbage disposal. Many applications are being made in industry for turning factory waste into valuable by-products. Cut disposal costs with M & M Reduction Machines. Send us your problems.

MITTS & MERRILL
1000 SOUTH WATER STREET • SAGINAW, MICHIGAN

For more details circle NED-9014 on enclosed inquiry slip

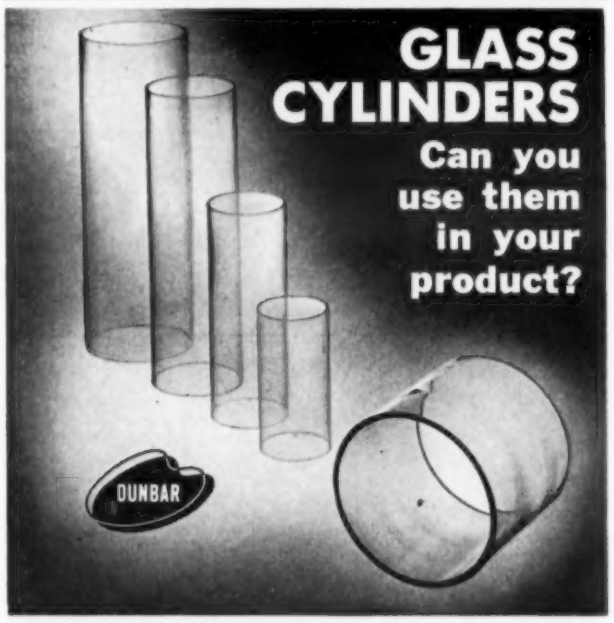
Air Operated
ROTARY WORK FEEDER

Deftly holds and delivers small parts to drill, tap, swage, stake, etc. Stations accurate to .002". Guaranteed against over-travel or "skipping". Indexes as slow or fast as you like, up to 10,000 per hour. Compact and sturdy, easy to tool and hook up.

Standard dial plate 10"; available in 12". For a new job, simply tool up a new dial. Readily combines with "MEAD-MATIC" Timer, Air Hammer, Air Press, Drill presses, etc.—to make almost completely automatic machine—operator merely loads. Write for full details.

MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE., DEPT. N-120-A, CHICAGO 41, ILL.

For more details circle NED-9015 on enclosed inquiry slip



For dispensers, merchandise displays, visible hoppers, lighting fixtures, sight feeders, meters, columns or any other applications, DUNBAR offers you a wide variety of cylinder sizes in economical quantities. Or we will fabricate blown glass cylinders to your specifications. We invite your inquiries. Write Dept. 69 for our Glass Cylinder catalogue No. C-51.

Dunbar Glass Corporation
DUNBAR, WEST VIRGINIA
NEW YORK CHICAGO CLEVELAND LOS ANGELES

For more details circle NED-9016 on enclosed inquiry slip

No More Guessing . . . accurate Torque Control

Friction Adjustments Moving Parts Fragile Mechanisms

No More Guessing

Accuracy — Permanently Accurate—Closer Product Quality Control Tool Life—Lower Tool Cost

Speed — Lower Assembly Cost Per Unit

How tight threaded fasteners are.

Use a Sturtevant permanently accurate torque wrench to obtain product quality control and thus insure field performance and product reputation. Write for Bulletin—SW22

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

For more details circle NED-9017 on enclosed inquiry slip

Plenty of room for maintenance

PACKING REPLACEMENT IS QUICK and easy, yet frame is strong and rigid. Pump and motor are mounted on a single shaft in a single frame with no adapter between. Alignment is perfect and permanent.

Bearing maintenance procedures have been eliminated with sealed bearings. A new type of double bearing seal excludes all liquid under all normal operating conditions.

All cast iron frame, replaceable wearing rings, shaft sleeve and other high quality features give you low cost per gallon pumped.

See your Allis-Chalmers Dealer or Sales Office or write for Bulletin 52B6140.

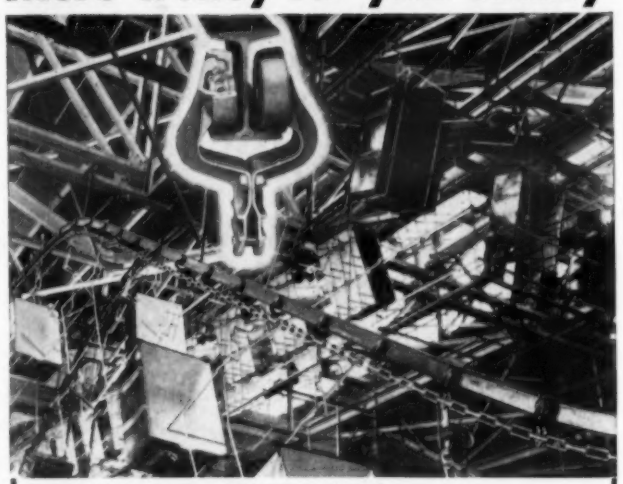
A 3183

ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

For more details circle NED-9018 on enclosed inquiry slip

More trolley for your money



LINK-BELT Ball Bearing Overhead Conveyor Trolley

- Drop forged steel wheel and bracket
- Simple in design; fewer parts; less maintenance
- Unusually high load bearing capacity
- Bearings adequately lubricated and sealed
- Operates smoothly and quietly with high efficiency
- Quickly installed on new or existing systems
- Users report remarkably trouble-free operation

Folder 2241-B gives full details, send for your copy today.

11,809 **LINK-BELT COMPANY**
Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. Offices, Factory Branch Stores and Distributors in Principal Cities.

For more details circle NED-9019 on enclosed inquiry slip

K-P *Spiral Woven Wire* CONVEYOR BELTS

Made in suitable metals and mesh sizes for conveying, material handling, processing and heat treating. Particularly well adapted to the food industries where free circulation of air and drainage are required. K-P Flextrough Belts with flanged edges prevent small parts from rolling off the belt. Side chains provided for sprocket drive. Complete special purpose conveyors designed and manufactured.

KP

"Keeps Promises"

KORB-PETTIT
Wire Fabrics & Iron Works Inc.
Engineers and Manufacturers

1501 N. Mascher St.
Philadelphia 22, Pa.

Wire Mesh, Spiral Woven Wire Conveyor Belts, Infra-Red Conveyor Dryers, Leather Finishing and Drying Machines, Industrial Wire Partitions, Machine and Window Guards, Cages, Enclosures, Grilles, etc.

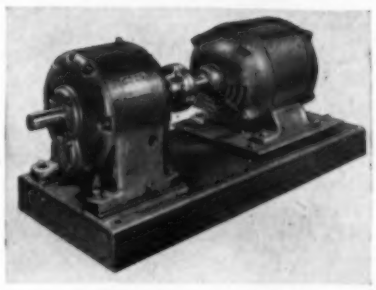
For more details circle NED-9020 on enclosed inquiry slip

TRUCK WASHING MACHINE uses soapless synthetic detergent

Standard Drex-Foamizer machine illustrated is portable and can be used either in stall or with continuous through-type conveyor. Motor-driven pump quickly homogenizes Drex-Foam detergent with water to form swirls of cleaning foam which is sprayed over truck body. Foam wets and loosens all dirt, grease and road grime without streaking or harming waxed or polished finishes. Made by **Detrex Corp.**, P. O. Box 501-N, Detroit 32, Mich.

For more details circle NED-9021 on enclosed inquiry slip

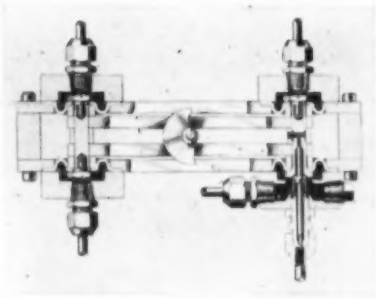
MOTORIZED GEAR DRIVE in double and triple reductions



Consisting of compact enclosed helical gear drive, separate motor and flexible coupling, Motogear drive has welded steel base plate. Unit is built in variety of sizes and in wide range of ratios and horsepowers. Input and output shafts are concentrically in line. Provision is made for simple shaft alignment. Helical gear drive is available also without motor as separate self-contained unit. Made by **Link-Belt Co.**, Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.

For more details circle NED-9022 on enclosed inquiry slip

RATIO TOTALIZER is used in computing type circuits



Two or more control signals or pressures can be combined in any desired ratio to produce single output loading pressure for instrumentation and control by use of this Ratio Totalizer. It can be used to add, subtract, multiply or divide control signals in computing circuits, or to introduce proportional band action, rate action or automatic reset either separately or in any desired combination. It consists of four pressure chambers arranged in opposing pairs and acting through nonmetallic flexible diaphragms on two ends of balance beam. Unit measures 9½ in. long overall and centers of pressure on balance beam are 6 in. apart. It can be mounted in any position in space of 10 x 8⅜ x 7½ in., and two ⅜-in. mounting studs on 8⅞-in. centers are provided. Made by **Hagan Corp.**, 1945 Hagan Bldg., P. O. Box 1346, Pittsburgh 30, Pa.

For more details circle NED-9023 on enclosed inquiry slip

DURO ELECTRIC DRILLS

. . . 3 Sweet Ways to Drill Holes

They're streamlined to give least offset to the center line of the chuck; you put the drill to the work as naturally and surely as pointing your finger. They're versatile too; use them for wire brushing, polishing and other purposes, as well as drilling holes.

All have famous Jacobs keyed chucks, New Departure spindle bearings, helical double reduction gears of hardened alloy steel, and GE motors that won't stall, won't overheat at continuous peak load . . . and they're competitively priced! Ask your Distributor about Duro's 3 Sweet Ways to Drill Holes! . . . DURO METAL PRODUCTS CO., 2649 N. Kildare Ave., Chicago 39, Illinois.

Duro Utility for maintenance men, home workshop, etc.

Duro Heavy Duty Pistol Grip for "around the clock" production.

Duro Breast Drill, Heavy Duty. Large capacity. Packs a wallop!

Mechanically-minded men enjoy this big *FREE* Duro Tool Catalog. Just write.

"DOGGONE GOOD"

DURO TOOLS 2906
FOR GRATIFYING PRODUCTION

For more details circle NED-9024 on enclosed inquiry slip

With One OXWELD Blowpipe
Trade-Mark

You can do All these Jobs . . .

- ✓ Weld steel (28 gage to 1 inch thick)
- ✓ Cut steel (up to 8 inches thick)
- ✓ Heavy-duty heating
- ✓ Braze-welding
- ✓ Hard-surfacing
- ✓ Gouging
- ✓ Rivet-cutting

Whether you want to do one—or more than one—of these jobs, all you need is the OXWELD W-17 Blowpipe with the right welding head or a cutting attachment.

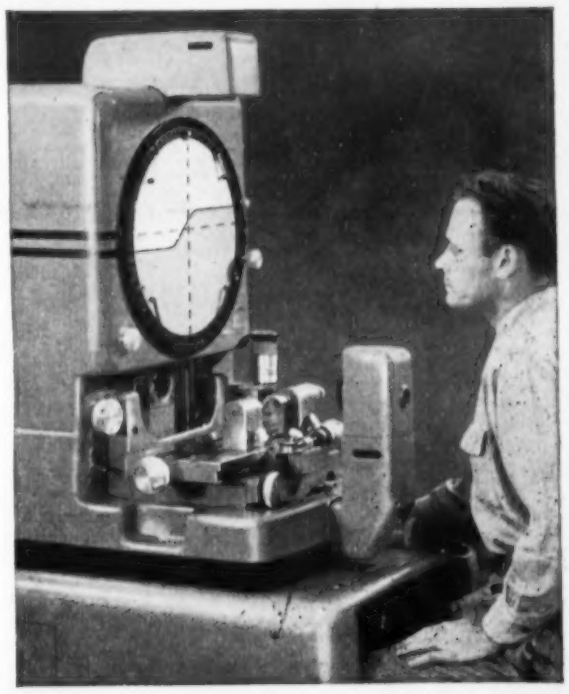
In addition to its adaptability for many uses, the time-proved design and sturdy construction of the W-17 assures dependable, long life. Added years of ***trouble-free service*** mean the greatest overall saving to you. Write today for full information.

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
30 East 42nd St. UCC New York 17, N. Y.

The term "Oxweld" is a registered trade-mark.

For more details circle NED-9025 on enclosed inquiry slip

NOW THE MOST VERSATILE OPTICAL COMPARATOR YOU CAN BUY



Kodak Contour Projector Model 2

It handles large parts. There's 6¾ inches from lamphouse to object and 8 inches from object to lens—*at all magnifications.* Front lamphouse pivots to make room for long objects under surface illumination. Vertical travel is 4 inches.

It gives surface illumination in any of 5 planes, and switches instantly from surface illumination to silhouette projection, or to a combination of both. Instant dialing to any of 6 magnifications from 10× to 100× without distortion. The 14-inch screen is extra bright; no hoods or curtains needed —even in fully lighted rooms. Designed for all-day operator comfort, yet built to precise toolroom standards.

May we show you the savings it can make on your own inspection problems?

EASTMAN KODAK COMPANY
Industrial Optical Sales Division
Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR
SHOWS contours, of course / surface details . . . / deep, blind holes

Kodak
TRADE-MARK

For more details circle NED-9026 on enclosed inquiry slip

Steady heat Smooth flow with STANLEY ELECTRIC SOLDERING IRONS

Stanley Irons stand up under constant use and high temperature because the heat conducting core is properly wound and the heating head is sealed so that moisture and flux fumes can't enter. Comfortable and easy to use . . . light, properly balanced and with cool hardwood handle. Models for both screw-tip (with solid metal core) or plug tip. Write for free helpful booklet, "Expert Soldering". Stanley Tools, New Britain, Conn.

THE TOOL BOX OF THE WORLD

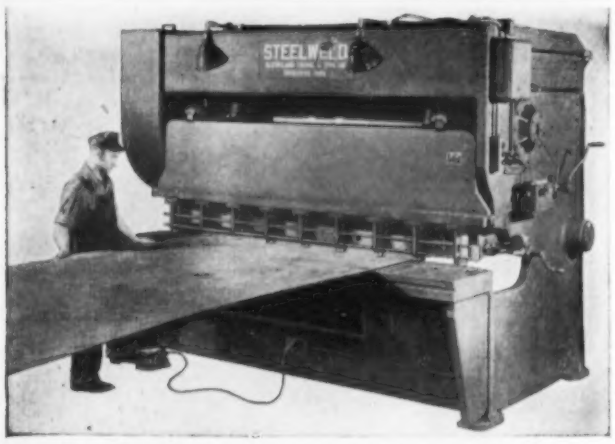
STANLEY

Reg. U.S. Pat. Off.

Stanley No. 350 Soldering Iron

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

For more details circle NED-9027 on enclosed inquiry slip



ALL STEELWELD SHEARS *Controlled Electrically!*

Convenient electric foot-switch operation is standard for all Steelweld *Pivoted-Blade* Shears. The switch can be slid around floor to wherever handiest. It eliminates tiresome leg lifting required for usual mechanical foot treadle.

Steelweld Shears are built in all sizes for plate to 1-1/4" thick. Get the facts on these truly modern machines.

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

Send for free Catalog No. 2011

THE CLEVELAND CRANE & ENGINEERING CO.
6628 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

For more details circle NED-9028 on enclosed inquiry slip

TEMPILSTIKS°

the amazing Crayons that tell temperatures

in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

$2 each

gives up to 2000 readings

it's this simple:
- Select the Tempilstik° for your working temperature.
- Mark your workpiece with it.
- The Tempilstik° will leave a liquid mark as soon as its specified temperature is reached.

Available in these temperatures (°F)

113	213	313	450	850	1250	1650
125	225	325	500	900	1300	1700
138	238	338	550	950	1350	1750
150	250	350	600	1000	1400	1800
163	263	363	650	1050	1450	1850
175	275	375	700	1100	1500	1900
188	288	388	750	1150	1550	1950
200	300	400	800	1200	1600	2000

Also available in pellet and liquid form.

TEMPIL CORPORATION
132 W. 22nd St., New York 11, N. Y.

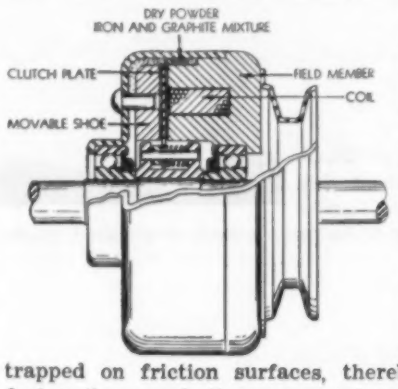
FREE—Tempil° "Basic Guide to Ferrous Metallurgy" —16¼" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____
COMPANY _____
ADDRESS _____

For more details circle NED-9029 on enclosed inquiry slip

ELECTROMAGNETIC DRIVES actuated by iron-graphite mixtures that produce friction without wear

Illustrated variable air-gap electromagnetic device is one of two basic designs for clutching or braking applications that utilize magnetically established load-transmitting bond for conveying power from driving to driven member. In this type when coil is excited, shoe is drawn magnetically toward field, thus squeezing plate or plates between field member and shoe. As this occurs, particles of powder iron and graphite are trapped on friction surfaces, thereby automatically refacing them each time current is applied. Variable air-gap type is recommended where smooth clutching or braking engagement and action are required.



Other type, not shown, maintains fixed air gap between rotating members into which iron and graphite particles are drawn and literally 'frozen' between these surfaces when current is applied. This provides lubricated load-transmitting bond, strength of which depends upon value of exciting current applied to magnet coil. By varying exciting current, any condition of slip from full lock-up to full release can be obtained. When coil is deenergized, magnetic and lubricating particles comprising bond immediately collapse and members rotate freely with no viscous drag or creep. This type drive is usually recommended for constant slipping, modulating or retarder applications. Made by **Eaton Mfg. Co.**, 741 E. 140th St., Cleveland 10, O.

For more details circle NED-9030 on enclosed inquiry slip

POWDER-ACTUATED TOOL drives studs into masonry or steel for fastening purposes

Drive pins or threaded studs are seated firmly and instantly in concrete, steel, masonry or other materials with this Dual Action powder-actuated fastening tool. Fourteen improvements have been incorporated in this light duty model which provides turn operation for general working conditions and tap operation for use in confined locations. In either case, operator inserts Ramset set fastener and powder load in tool, places it against work and rams. New safety features include ease of cleaning, thick barrel wall, control which prevents operation at angles in excess of 15 degrees with work surface and large shield which must be attached before tool will operate. Single-point firing pin is used, and telescoping barrel must be depressed before tool will work. Fixtures for pin-point instantaneous fastening protects operator when working in tight spots. Made by **Ramset Fasteners, Inc.**, 12119 Berea Rd., Cleveland 11, O.

For more details circle NED-9031 on enclosed inquiry slip

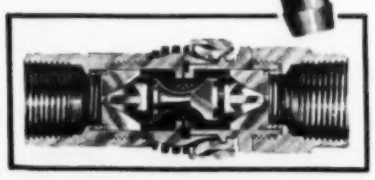
WHEN YOU . . .

Disconnect, You Stop the Flow in *Both* Ends

Wherever the flow of air, fluids, or gases must be interrupted, Wiggins *INST-O-MATIC* couplings are lowering costs. Uncouple a Wiggins. You've automatically stopped the flow in both ends. Connecting, or disconnecting, is as simple as switching on a light. Wiggins *INST-O-MATIC* couplings can increase efficiency in your plant today, and lower costs.

EQUIPMENT MANUFACTURERS

Users' experiences prove conclusively that this design stands up longer under extreme pressure and vibration, and rarely requires replacement. Inquire today.



BASIC SIZES: ¼", ½", ¾"; also intermediate sizes where needed. Unconditionally guaranteed to be leak proof from 0 to maximum recommended pressure.

Wiggins

For proof of performance, write for name of nearest representative. E. B. WIGGINS OIL TOOL CO., INC., 3424 E. Olympic Blvd., Los Angeles 23, Calif.

QUICK DISCONNECT
INST-O-MATIC COUPLINGS

REPRESENTATIVES IN PRINCIPAL CITIES

For more details circle NED-9032 on enclosed inquiry slip

HANNIFIN AIR CONTROL *Valves*

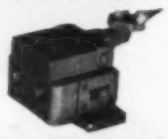
NEWEST TYPES! EXCLUSIVE DESIGNS for EVERY PURPOSE!

THE Hannifin line of Air Control Valves is complete—sizes and types for every purpose! Hannifin leads with newest, exclusive designs for fast, effortless control of air cylinders, presses, and other air operated equipment. Ask for recommendations.

"PACKLESS" HAND OPERATED

Simple, smooth-acting, positive 3-way or 4-way valves. "Packless" rotary disc type. Self-lapping. Sizes from ⅛" to 1¼". *Ask for Bulletin 57W.*

"EFFORTLESS" HAND OPERATED

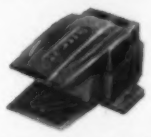


Fast, new, finger-tip, pilot operated sliding disc valve. Effortless; air pressure does the work! For single or double acting cylinders. *Ask for Bulletin 241.*

"PACKLESS" FOOT OPERATED

Treadle type; leaves operator's hands free for other work. Tight-sealing, self-lapping, rotating bronze disc. Sizes ¼" up to ¾". *Ask for Bulletin 57W.*

"EFFORTLESS" FOOT OPERATED



Fast, new, pilot operated, disc type valve. Light, effortless action. Rugged construction. With or without pedal guard. *Ask for Bulletin 240.*

HANNIFIN CORPORATION
1127 South Kilbourn Avenue Chicago 24, Illinois

For more details circle NED-9033 on enclosed inquiry slip

At Fred Heinzelman & Sons
NEW YORK, N.Y.

Pangborn Hydro-Finish CUTS HAND POLISHING OF DIES 60%

reports Mr. J. L. Crosby, General Manager

Shown here is the Pangborn Hydro-Finish unit which set new records at Fred Heinzelman & Sons. A pioneer of heat treated dies, the company reports: Hydro-Finish removes heat treat oxide discoloration, cuts hand polishing 60% to 70% and holds tolerances to a precision .0001"!

Find out how HYDRO-FINISH *can save you money*

Hydro-Finish is the answer to modern cleaning, decorating and finishing problems. As Fred Heinzelman & Sons have found, Hydro-Finish virtually eliminates tedious and expensive hand buffing and polishing on tool and die maintenance.

And, on the production line, Hydro-Finish assures better bonding, electroplating, painting—gives you *the surface you want* within .0001" with no pits, grooves or hard-to-clean imperfections left after cleaning.

For full information on the many ways Hydro-Finish can save you money, write today for Bulletin 1400-A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Maryland.

Pangborn
BLAST CLEANS CHEAPER with the right equipment for every job

For more details circle NED-9034 on enclosed inquiry slip

PIPE MARKERS

anyone can use— everyone can read

QUIK-LABEL Pipe Markers conform to American Standards Association Pipe Identification System. QUIK-LABELS come on handy cards . . . stick without moistening. Names of materials printed in large black letters on correct ASA background colors. CAN BE READ UP TO 75 FEET. Markers for over 140 materials, ***including all materials listed in ASA Standard A13,*** available on Brady Stock Cards. Specials made to your order. QUIK-LABEL Pipe Markers are Silicone Plastic coated to resist dirt, grease, fumes, moisture . . . indoors or out. Replace slow and costly painting and hand stenciling. Exclusive Starter-Strip automatically releases part of label for fast peeling. QUIK-LABELS mark your pipes so that anyone who can read will know what's in them. ***QUIK-LABELS leave no room for doubt . . . or tragedy.*** Write for useful literature and FREE SAMPLES today.

FREE SAMPLES

W. H. BRADY COMPANY Established 1914

Manufacturers of Self-Sticking Tape Products
Chippewa Falls 5, Wisconsin • Distributors in 125 Cities

▲ For more details circle **NED-9035** on enclosed inquiry slip ▲

FREE BOOKLET

shows how 15 products are improved with G-E Glow Lamps!

SEE specific suggestions for improving the usefulness and sales appeal of home appliances, wiring devices, industrial equipment with G-E Neon Indicator Glow Lamps. Glow Lamps give off practically no heat, require a minimum of current, withstand severe vibration and shock, generally last for the life of the product.

WRITE NOW for this free, informative booklet to Lamp Department, Div. 166-NED 12, General Electric Company, Nela Park, Cleveland 12, Ohio.

You can put your confidence in—

GENERAL ELECTRIC

▲ For more details circle **NED-9036** on enclosed inquiry slip ▲

RUBBER IS THE ANSWER

Performing faultlessly in former trouble spots, Acushnet precision-molded rubber parts have proven to be the answer to many application problems. Advanced techniques in compounding synthetic and natural rubbers, skilfull designing and mold-making enable Acushnet to produce parts that meet your special requirements. Our engineers will gladly collaborate with your designers or make separate recommendations.

Acushnet
PROCESS COMPANY
NEW BEDFORD, MASS., U. S. A.

Address all correspondence to 782 Belleville Ave., New Bedford, Mass.

▲ For more details circle **NED-9037** on enclosed inquiry slip ▲

INDUSTRIAL DOORS can be operated automatically

Available for electronic approach or remote control, Prest-O-Matic industrial doors prevent excessive heat or cold loss and minimize air drafts. They are made in standard sizes from 6 to 10 ft wide and from 6 to 10 ft high. Construction can include pedestrian doors and metal covering if desired. Doors fold open to minimize needed operating space and open or close within 3½ seconds. Made by **Clark Door Co.**, 186 Rose St., Newark 8, N. J.

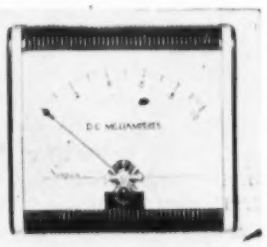
▲ For more details circle **NED-9038** on enclosed inquiry slip ▲

FURNACE CONTROL PANEL is pre-wired for easy installation

Attached directly to furnace body, Temco control panel requires only two simple connections to furnace and one to electric line before operating. Panel houses temperature controller, load-carrying relay, thermocouple lead and fused disconnect switch. Either fully-automatic electronic pyrometer-controller or manually-operated controller-indicator can be used in control panel. Equipment can be used with redesigned furnaces available in various sizes for hardening, drawing, annealing, pre-heating for high-speed hardening and general laboratory work requiring temperatures up to 1900° F. Made by **Thermo Electric Mfg. Co.**, 484 W. Locust St., Dubuque, Iowa.

▲ For more details circle **NED-9039** on enclosed inquiry slip ▲

PANEL INSTRUMENTS in 2½, 3½ and 4½-in. sizes



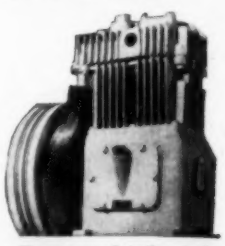
Line of modernistic rectangular panel instruments features large easy-to-read scales, and they are designated according to size listings as model Nos. 1127, 1027 and 1029. Etched faces extend across entire front of meters and are protected with unbreakable plastic while vertical chrome-plated strips are recessed into plastic fluted cover. Open scale layouts provide space for use of customer's name, trademark or color combinations. Made by **Simpson Electric Co.**, Dept. F-6, 5200 W. Kinzie St., Chicago, Ill.

▲ For more details circle **NED-9040** on enclosed inquiry slip ▲

DOES YOUR PRODUCT NEED Dependable Compressed Air Supply?

SELECT QUINCY COMPRESSORS

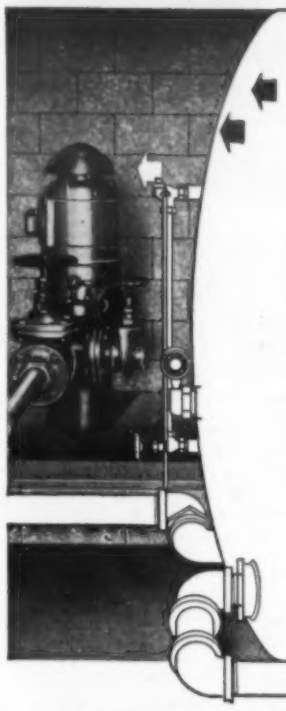
When a product "needs something" to make it just right . . . consider compressed air. Hundreds of manufacturers use Quincy Compressors as a part of their own product . . . and in their plant operation. Quincy manufactures a complete line of both air and water cooled units in a variety of mountings. Get FREE catalog.



Quincy COMPRESSORS

QUINCY COMPRESSOR CO.
Dept. NE-120, Quincy, Illinois

▲ For more details circle **NED-9041** on enclosed inquiry slip ▲



DEMING PUMP

saves owner **$900.00** per year on water

Factory water supply cost a small manufacturer $1200.00 a year. A check-up was made to determine the cost of drilling a well and installing a Deming Deep Well Turbine Pump.

As a result of the check-up the installation was made. The annual saving on water averages $900.00

Savings as high as 60% on water costs have been made with Deming Deep Well Turbine Pumps. A Deming Distributor is near you to help YOU check up on YOUR costs of water.

In the meantime, write for the free BULLETIN 4700 which explains details about Deming Deep Well Turbine Pumps.

THE DEMING CO. • 520 BROADWAY • SALEM, OHIO

Deming Pumps

▲ For more details circle **NED-9042** on enclosed inquiry slip ▲

NOW a Cowles DISSOLVER with Water-Pressure Hydraulic Lift

Designed for operations where it is cheaper and easier to process materials in containers brought to the machine, the impeller of this Cowles Dissolver raises or lowers by hydraulic pressure from the water main.

BRIDGE SWINGS 360°. For continuous operation while processed containers are being removed, the bridge carrying the impeller swings through a complete circle of 360°, progressing from one container to another without interrupting the work flow.

TWO MODELS COVER WIDE RANGE

MODEL 20D-2H: Suited for motors up to 40 horsepower; will produce its maximum efficiency in containers from 24" to 54" in diameter.

MODEL 10D-1H (illustrated) is designed for motor up to 15 horsepower at 1800 rpm. Intended for a lift of 38" and containers ranging in diameter from 12" to 48"

BOTH MODELS can be had with explosion-proof motors, and with variable-speed V-belt drive for handling materials of widely different flow characteristics and viscosities.

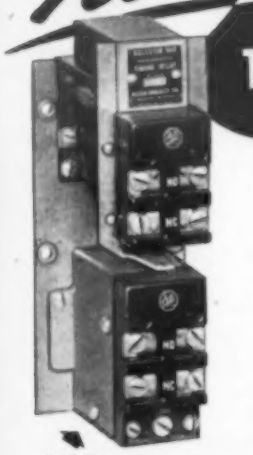
2 to 20 Times Faster in Dissolving or Dispersing:
Gum Solutions, Resins, Nitro-cellulose, Lacquers, Enamels, Paints, Biologicals, Coatings, Inks, Explosives, Plastics, Various Chemicals

Write or wire, and we'll tell you size of sample to ship for detailed test run in our laboratory.

The Cowles Company
INCORPORATED
1212 TRACKSIDE, CAYUGA, N. Y.
Associates: Shartle Bros. Machine Co., Division of Black Clawson Co., Middleton, Ohio; Alexander Fleck Ltd., Ottawa, Ont.

▲ For more details circle **NED-9043** on enclosed inquiry slip ▲

New... BULLETIN 849 PNEUMATIC TIMING RELAY



A-C Timer with Auxiliary Contacts

D-C Timer

Good for Millions of Operations

- For "dash up" or "dash down" operation
- Available for NEMA Type 1, 4, 7, and 9 applications

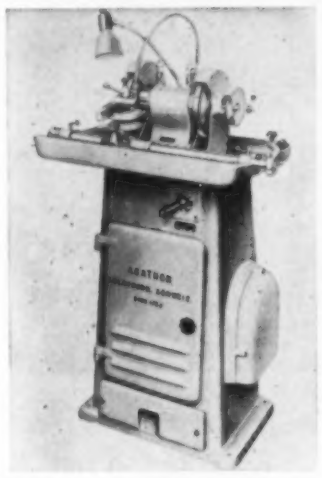
This new, compact, solenoid type, pneumatic timing relay utilizes a synthetic rubber bellows for controlling the tripping time. Has a range of from 10 cycles to 3 minutes, and an accuracy of approximately 10%. Its setting is easily adjustable over a wide range, and the relay resets instantaneously. This timer will provide satisfactory operation irrespective of temperature, humidity, or vibration conditions. Write for information. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.

A-B Quality

ALLEN-BRADLEY QUALITY MOTOR CONTROL

For more details circle NED-9047 on enclosed inquiry slip

GRINDING-LAPPING MACHINE precision toolholder is used



Cutter heads, engraving tools, round boring tools and other special shapes as well as standard cutting tools can be ground and lapped to close tolerances with this Swiss-made Agathon type 175A tool grinding and lapping machine. Tool to be ground is held in precision compound holder which slides on bar that is parallel to wheel spindle. It is only necessary to move holder to lapping wheel for final finishing job. Tools with from extremely small cross section up to 1.57 x 2.36 in. can be handled. Flexible coolant nozzle permits directing stream to any desired spot. Provision is made for grinding chip breakers and curlers. Up to 7-in. diameter diamond or abrasive wheels are driven by ¾-hp motor. Distributed by **Hauser Machine Tool Corp.**, Dept. 5N, 30 Park Ave., Manhasset, N. Y.

For more details circle NED-9049 on enclosed inquiry slip

INDUSTRIAL METALLOGRAPH focusing done through visual system of this routine control instrument

Optical systems for photography and visual observation of this improved industrial metallograph are coupled to permit all focusing to be done through visual system, eliminating necessity of ground glass focusing. All controls and adjustments are within easy reach, and directly in front of operator are 5 x 7-in. camera, monocular or binocular microscope eyepieces and ball-bearing mechanical stage. Four objectives on rotating turret, photographic eyepieces mounted on quick-change slide, camera shutter and color filters are operable from sitting position.

Grain size measurements, ferrous or nonferrous, are compared directly on ground glass with standard grain size charts, and case depth and linear measurements are made with micrometer rule. Objective, eyepiece and camera bellows setting are all identified by standard ASTM magnifications which range from 50X to 1500X, with 2000X available on special request.

Modern desk has linoleum top and storage space for accessories and supplies. All wiring is built-in, and desk is styled in keeping with trend in modern industrial equipment. Made by **American Optical Co.**, Scientific Instrument Div., Sugar & Eggert Rds., Buffalo 15, N. Y.

For more details circle NED-9050 on enclosed inquiry slip

"COMMERCIAL"

OBROUND HEADS

For oil burner tanks

275 gallons capacity

"Commercial" obround heads are formed cold in dies; each head of the same size and style fits exactly

Surfaces are smooth and flanges free from wrinkles

"Commercial" obround heads can be furnished in double dished, parabolic, flanged and dished, flat flanged and in three different sizes.

Pipe support lugs also available.

THE COMMERCIAL SHEARING AND STAMPING COMPANY.
YOUNGSTOWN · 1 · OHIO · U.S.A.

For more details circle NED-9052 on enclosed inquiry slip

SLY PIONEERS AND LEADERS IN Dust Control

Sly Dust Collector used for the collection of fine, float, silica dust in a large southern California plant. Thousands of other Sly Dust Collectors are used similarly for suppression and collection of injurious dusts.

THE most effective—as well as simplest and cheapest—method of dust collection is by cloth filtration. The Sly Collector uses more cloth than any other and hence has greater filtering capacity.

This additional capacity plus savings in operation and maintenance make Sly most inexpensive in the long run. Ask for Bulletin 98 and state your condition so that we can write you fully.

THE W. W. SLY MFG. CO.
4748 Train Avenue • Cleveland 2, Ohio
Representatives in New York • Chicago • St. Louis • Philadelphia • Detroit
Minneapolis • Birmingham • Cincinnati • Los Angeles • Rochester • Toronto

For more details circle NED-9053 on enclosed inquiry slip

SAVE as much as 15% in welding time and gas...

REDIFLUXED BRONZE welding rod

Does away with hand-fluxing when brazing iron and steel or welding bronze and brass

YOU can't beat this high-quality flux-coated, low-fuming manganese-bronze rod for best results—and savings in labor and gas used. No stopping to apply flux by hand. Jobs are done faster.

The coating provides automatic accurate control of flux. This insures correct bonding—gives dense, ductile deposits with high tensile strength, ideal for machining and threading. Ideal for wearing surfaces, too, because of the toughness and resiliency of the deposited metal.

REDIFLUXED BRONZE is free-flowing, with a low melting point of 1625° F. and a flow point of 1680° F. Less heat is required—more gas saved.

Recommended for brazing steel, cast iron and malleable iron; for welding brass and bronze. Sold in rods ⅛", 3/16" and ¼" in diameter, 36" long, packed in tubes containing 10 lbs. . . . Switch to REDIFLUXED BRONZE today, backed by NCG.

Write for Illustrated Folder

NATIONAL CYLINDER GAS COMPANY
846 North Michigan Avenue Chicago 11, Illinois

NCG
EVERYTHING FOR WELDING

Copr. 1950, National Cylinder Gas Co.

For more details circle NED-9048 on enclosed inquiry slip

Stanzoils

Grip Oily Things As If Dry!

Liquid-Safe Hands Do Better Work...

Most rubber or neoprene gloves are slippery as wet eels—but not neoprene Stanzoils. Marvelous non-slip finger finish grips oily work as if dry, gives workers assurance and speed. Made of Du Pont neoprene, these gloves far outlast rubber, protect hands in harmful materials at extra low cost per day. Stanzoil hand safety pays you in more production, less costly injury claims. Also available in white neoprene. Write today for informative catalog.

Synthetic Rubber Division
The Pioneer Rubber Company
634 Tiffin Road Willard, Ohio, U. S. A.
Los Angeles

STANZOIL PIONEER

OVER 30 Years OF QUALITY GLOVE MAKING

For more details circle NED-9051 on enclosed inquiry slip

OLSON CONVEYORS

CONTINUOUS MATERIAL FLOW

TO EVERY DEPARTMENT

Here's another example of Olson ingenuity and engineering ability. Combining a revolving table with diverging conveyors, enables one operator to dispatch each incoming package to its proper department rapidly . . . smoothly . . . safely.

If your operation involves the moving of parts, products or raw materials, Olson can provide an efficient system for lifting, lowering or on-the-level handling, tailored to meet your specific requirements.

Get the facts. Write Olson today.

See our catalog in Sweet's File

SAMUEL OLSON MFG. CO., INC.
2423 Bloomingdale Ave. • Chicago 47, Illinois

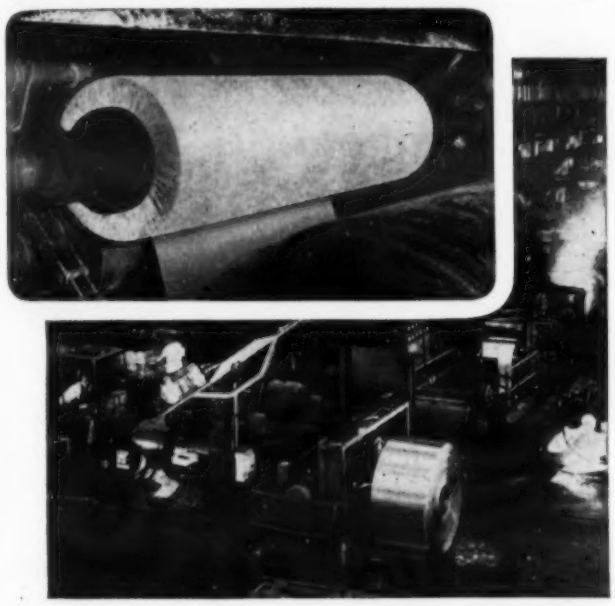
For more details circle NED-9054 on enclosed inquiry slip

Holes drilled in Sparger Pipes wear rapidly due to a combination of high steam velocities and corrosion. When wear occurs, the Sparger Pipe must be replaced. With SK SPARGER NOZZLES, you replace the nozzle, NOT the pipe—and save money. SK SPARGER NOZZLES are inexpensive, simple to install or replace. In operation, they *mix* the steam with the liquid giving uniform temperature by means of agitation throughout the tank. In a 100 gallon tank, one nozzle, using 183 lb. of steam per hour at 40 psi gauge, will circulate 20 gpm of water and will raise the temperature of the tank water 40° F. in 11 minutes. Operation is quiet.

For complete information, send for Bulletin 3-A.

SCHUTTE AND KOERTING CO.
1177 THOMPSON STREET • PHILADELPHIA 22, PA.

▲ For more details circle **NED-9055** on enclosed inquiry slip ▲



Strip comes clean at *1500 feet per minute* with OSBORN power driven brushes

ON the continuous scrubbing operation above, 6 Osborn Heli-Master* Brushes are mechanically cleaning strip steel at speeds of over 1500 feet per minute. This vital mill operation is removing all traces of rolling oil from the strip prior to electrolytic tin plating.

Heli-Master Brushes can be supplied with the correct material to do tough cleaning jobs well. In the job illustrated, the operating conditions include high pressure hot sprays. The brushes give around-the-clock dependable performance. They are helping assure continuous, uninterrupted production schedules by maintaining consistent high quality of finished products.

If you have a continuous strip cleaning, sheet scrubbing, scale removing, bonderizing or conveyor cleaning problem, it is likely that it can now be done easier, faster and at lower cost with new improved Osborn brushing techniques. Why not consult your Osborn representative. Call or write—

THE OSBORN MANUFACTURING COMPANY
Dept. 371, 5401 Hamilton Avenue • Cleveland 14, Ohio
*Trademark

Osborn Brushes

WORLD'S LARGEST MANUFACTURER OF BRUSHES FOR INDUSTRY
POWER DRIVEN BRUSHES • PAINT BRUSHES • MAINTENANCE BRUSHES

▲ For more details circle **NED-9056** on enclosed inquiry slip ▲

SMALL TAIL GATE LOADER
lifts 650-lb load to truck level

Built expressly for use on pickup trucks, model TG Hydro-Loader handles loads of 650 lb from ground to truck in less than one minute. This tail gate loader is hydraulically powered and is manually actuated. It is installed easily on all small trucks. Made by **Stratton Equipment Co.**, Dept. N, Hanna Bldg., Cleveland 15, O.

▲ For more details circle **NED-9057** on enclosed inquiry slip ▲

PIPE THREADING CHUCK
operates on low pressure air

Having scroll type universal adjustment for pipe size, this air-operated power chuck with integral air cylinder is completely self-contained. Chuck has universal cam actuated gripping action and can be operated without stopping machine arbor. Made by **John Ramming Machine Co.**, Bignall & Keeler Div., 4597 McRee Ave., St. Louis 10, Mo.

▲ For more details circle **NED-9058** on enclosed inquiry slip ▲

DRILLING-CHAMFERING MACHINE
produces holes in large ring

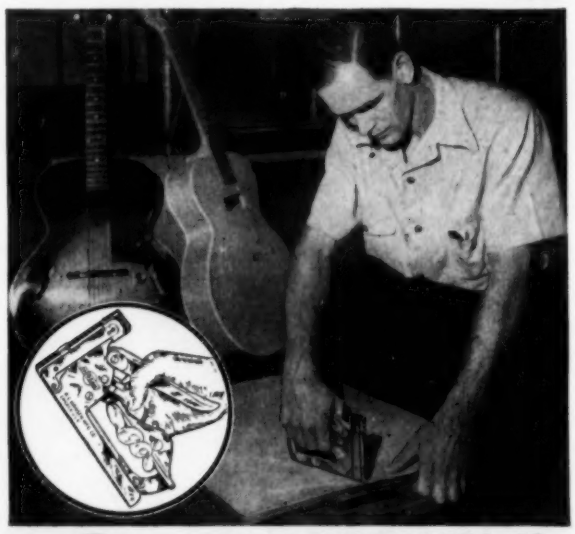
Having automatic work cycle, this special-purpose machine drills and chamfers 36 holes around circumference of 3¼-in. thick 36-in. diameter ring. Capacity is 1.6 pieces per hour, and only manual operations required are loading, clamping and unloading workpiece. Control mechanism provides for alternating depth of holes. Standard quill unit is used. Vertical head also drills three groups of holes in top of part. Indexing is automatic by means of 34-in. diameter work table and Geneva index mechanism. Vertical 11-spindle head is powered by 20-hp motor. Separate coolant system consists of 67-gal tank, pump and ½-hp motor. Made by **Snyder Tool & Engineering Co.**, 3443 E. Lafayette Ave., Detroit 7, Mich.

▲ For more details circle **NED-9059** on enclosed inquiry slip ▲

HANSEN • THE TACKER with 1001 USES

ASSEMBLY of wood veneers is speeded up, saving time, labor and material, for Gibson, Inc., Kalamazoo, Mich., with the Hansen Model T-2 Tacker. Tacking operation makes loading of hydraulic presses easier, improves handling and prevents veneers slipping.

In every conceivable industry Hansen Tackers are making a record for themselves — automotive, radio, aviation, building, plastics, woodworking, shipping, display. What is your problem? Submit sample or sketch, with details. REQUEST BOOKLET



HANSEN
A.L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE.
CHICAGO 40, ILL.

▲ For more details circle **NED-9060** on enclosed inquiry slip ▲

Hein-Werner Hydraulic Jacks are basic maintenance tools!

You'll save time and money at maintenance jobs when you put Hein-Werner Hydraulic Jacks to work for you. A versatile package of hydraulic power for bending, pressing, pushing or lifting operations. Made in models of 1½, 3, 5, 8, 12, 20, 30, 50 and 100 tons capacity. See your industrial supply distributor or write us.

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORPORATION
WAUKESHA, WIS.

▲ For more details circle **NED-9061** on enclosed inquiry slip ▲

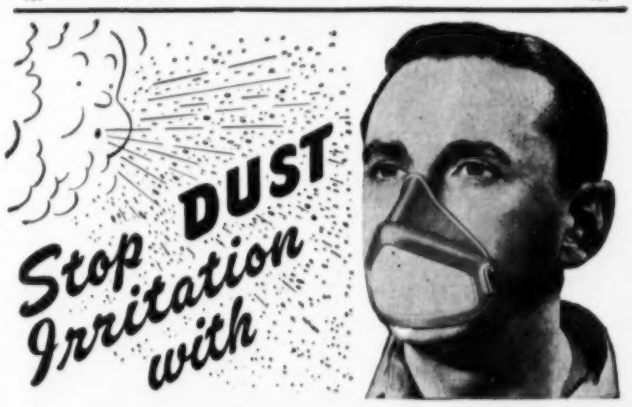
Can You Use SELF-LUBRICATING JOHNSON LEDALOYL BEARINGS?

IF SO, YOU WILL SAVE MONEY

NEW USES for these porous, oil-impregnated bearings are being discovered every month. You may need them for applications difficult to lubricate. They may even be sealed in place. Made by powder metallurgy, they are very low in cost. Johnson engineers will assist you in determining whether Ledaloyl Bearings can be used to advantage. Write today.

Johnson Bronze
SLEEVE BEARING HEADQUARTERS
580 SOUTH MILL STREET • NEW CASTLE, PA.

▲ For more details circle **NED-9062** on enclosed inquiry slip ▲



new sensational **FLEX-A-FOAM**
— FILTER MASK —

Easier to breathe through and talk through than an ordinary handkerchief . . yet filters non-toxic nuisance dusts as small as 1/25000 of an inch!

- **Extremely light in weight — only 1 ounce complete.**
- **Self-adjusting to every face size.**
- **Simple in design with only 4 interlocking parts.**

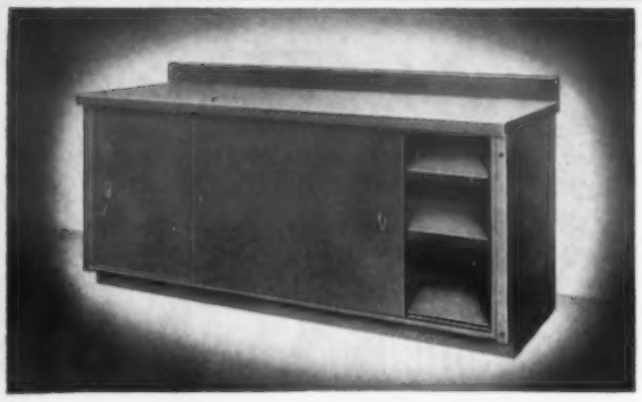
SAMPLE $1.50 POST PAID

Dust protection your workers will welcome and WEAR!

Write TODAY for descriptive circular

THE GOGGLE PARTS COMPANY
1468-70 W. 9th St. • Cleveland 13, Ohio

▲ For more details circle **NED-9063** on enclosed inquiry slip ▲



ARISTOCRAT of WORK BENCHES

. . . built for men accustomed to the finest tools and equipment

We "pulled out all the stops" when we designed the HALLOWELL Cabinet Bench, giving it more "custom" features than any other stock bench we know of. All-steel construction, choice of top materials, ample storage space, standardized units, interchangeable accessories, and trim good looks are just a few of its advantages.

Bulletin 702 tells the story. Write for your copy today!

HALLOWELL
SHOP EQUIPMENT OF STEEL
SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-9064 on enclosed inquiry slip

Another BRAND NEW H® SWITCH with wide applications

Model 2160A

A *double pole, single throw* toggle switch, this completely new "Diamond H" product incorporates all these long-wanted features:

- ***Compactness . . .*** switch body measures only 1-3/16" x 1-3/16" x 1", is entirely enclosed for safety and protection of working parts.
- ***Quick, simple installation . . .*** snaps into hole; spring clips hold firmly on any panel .025" to .100" thick. Overlapping shoulders permit ample tolerances in finish dimensions of installation hole.
- ***Good looks . . .*** with plastic body in standard brown, black and white, or other colors on special order.
- ***Long life and positive action . . .*** through rugged construction and a design principle that's new and exclusive in this application. Contacts are held together in "on" position under pressure of spring action.
- ***High overload capacity . . .*** conservatively rated at 15 and 20 A., 125 V.; 10 A., 250 V., *and up to ¾ H. P.*, 250 V., A. C.

Applications include motor and heater circuits in portable ungrounded appliances such as hot plates and fan type heaters, together with beauty parlor, air conditioning and ventilating equipment, ironing machines . . . virtually any such device that requires cutting both sides of a line at the same time.

Write today for complete details on how this new "Diamond H" switch can fit your products.

THE HART MANUFACTURING COMPANY
204 Bartholomew Ave., Hartford, Conn.

For more details circle NED-9065 on enclosed inquiry slip

ELECTRIC FORK TRUCK
telescoping lift model is available in 5000 and 6000-lb load capacities

Having overall height of 83 in., this electric fork truck provides standard telescoping lift of 126 in. and 61 in. of initial lift. Wheelbase is 48 in. and outside turning radius is 79 in. Lift and tilt mechanism is hydraulically-operated from low-pressure system. Drum-type NoPlug dynamic braking controller predominates when motor is reversed while truck is in motion. Direction is selected by manual control on dash panel and speed is selected by five-speed foot-operated accelerator. Electrical interlock with brake and seat provides dead-man control.

Mechanical drum-type air-cooled brake is mounted on motor shaft to provide equalized braking through differential. Worm-drive power axle and wide-angle steering axle are employed. Latter is of cast-steel knuckle type, mounted in rubber blocks and pivoted longitudinally to accommodate to uneven roadways. Made by **Baker-Raulang Co.**, Baker Industrial Truck Div., 1245 W. 80th St., Cleveland 2, O.

For more details circle NED-9066 on enclosed inquiry slip

60-TON BENDING ROLL
handles 14 ft x 1-in. mild steel

Fabricated from heavy H-beams, channel and plate, model 20-L plate bending roll is normally installed in pit equal to main subframe in height which brings working level

to 42 in. Standard machine is furnished with slip ring motor for main drive and squirrel-cage high torque motor for raising and lowering drive. It is equipped with drop end for removal of fully rolled cylinders and is designed with automatic balance bar so that whenever drop end is lowered it automatically raises top shaft to release pressure on rolled sheet. Roll shafts are machined from SAE 1040 carbon steel forgings and can be obtained with grooving as optional feature. Roll position indicators are furnished as standard equipment. Made by **Webb Corp.**, Dept. NED-S 49, Webb City, Mo.

For more details circle NED-9067 on enclosed inquiry slip

SHAKEPROOF thread-cutting screws

ACTUALLY CUT THEIR OWN THREADS IN DIE-CAST MATERIALS!

Because their exclusive off-center, wide slot presents an acute serrated cutting edge to the work, Shakeproof Type 23 Screws are ideally suited for use in die-castings and in metals which tend to powder when driven. With exceptional free-cutting action, they produce a standard machine screw thread and completely eliminate separate tapping operations.

send for *FREE* sample kit No. 10

Try these screws! Prove to yourself their time and money saving advantages. Write today!

SHAKEPROOF inc.
DIVISION OF ILLINOIS TOOL WORKS
2501 North Keeler Ave., Chicago 39, Ill.

For more details circle NED-9068 on enclosed inquiry slip

NEW

MODEL-H NOLAN 1-Man Car Door Opener

New safety and efficiency features now make the Nolan 1-Man Car Door Opener a more necessary labor-saving, money-saving help than ever before!

NEW improved balance assures automatic unlocking of pawl for chain stripping during door opening or closing operation.

NEW safety hook swings 180 degrees; locks positively in place before pulling; cannot become detached.

NEW safety hook with locking latch prevents accidental release when pulling.

Opens Doors in 20 Seconds or Less!

No gangs needed. No mangled limbs or loss of life. A few quick pulls on anchor chain gets any door open in a jiffy. The NOLAN saves its low initial cost in first hour of operation.

FREE LITERATURE

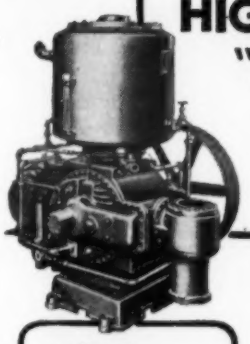
Order one or more NOLAN Model-H Car Door Openers now. Catalog on request.

$29.50 F.O.B. Bowerston

THE NOLAN COMPANY
128 Pennsylvania Street • BOWERSTON, OHIO

For more details circle NED-9069 on enclosed inquiry slip

HIGH VACUUM is "SUCKER STUFF" for BEACH-RUSS Vacuum Pumps



- ***Faster Pump Down***
- ***Lowest Pressures***
- ***Highest Efficiency***
- ***Longer Service***

Whether it's in chemical processing such as distillation, extraction or impregnation; metallizing or coating; clay deairing, electronic work or vacuum pick-up-and-place, position-and-hold or feeding of sheets, or other vacuum machine operations, Beach-Russ Single Stage Pumps provide the required low pressure fast and steadily. Two types of pumps are available:

Type SS Rotary Pumps for pressure to 5 mm. Hg. absolute on dry and semi-wet work. Capacities—6 to 375 c.f.m.

Type RP Rotary Piston Pumps for pressures to 10 microns Hg. absolute and lower on dry or wet operations. Capacities—17 to 845 c.f.m.

Let Beach-Russ Pumps improve your vacuum operations. Write for Catalog.

BEACH-RUSS CO.
60 Church St., New York 7, N. Y.

For more details circle NED-9070 on enclosed inquiry slip

is tested for hardness which assures longer bushing life

149-A

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN

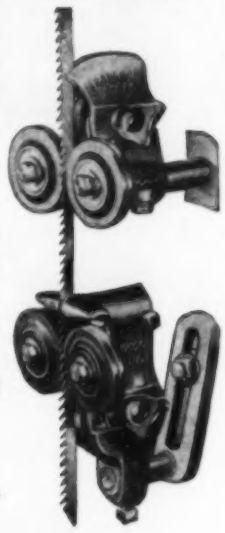
For more details circle NED-9071 on enclosed inquiry slip

MORE SPEED MORE SUPPORT

IMMEDIATE DELIVERY!

PADDOCK

BALL-BEARING BAND SAW GUIDES



You'll find PADDOCK BALL-BEARING BAND SAW GUIDES more than pay for themselves in: (1) Reducing blade breakage; (2) Cutting more materials; (3) protecting workmen; (4) Speeding up production.

Ball-bearing wheels, turning with blade, give strong friction-free support to saw blade. Wheels are interchangeable for years longer wear. They're of strong steel construction. Write today for Free Circulars and Prices.

PADDOCK TOOL COMPANY
1418 Walnut Street Kansas City, Mo.
Guide Makers Since 1920

Paddock BALL-BEARING **BAND SAW GUIDES**

For more details circle NED-9072 on enclosed inquiry slip

with this **lightweight, aluminum-alloy**

Handy-Handler CONVEYOR

- Aircraft-quality aluminum-alloy construction • 14-gauge aluminum trough actually thicker than 16-gauge steel • Rubber belt with rubber flights or No. 45 steel link chain with plow-contour rubber flights • Deep flared sides, 6¼" trough • Replaceable trough assembly • Standard 16-ft. length increases with 4-ft. midsection. • Easily removable motor mount and detachable hopper sides.

FOR ODD JOBS or the PRODUCTION LINE

Regardless of the size of your plant you'll find a spot where this one-man conveyor can save you all kinds of time and money.

The standard 16-ft. length weighs only 92 lbs. with quick-detachable power unit removed; approximately 150 lbs. with ¾-HP electric motor.

Investigate possibilities in your plant today. Write for price schedule and *free* literature.

BELT **THE BELT CORPORATION**
7402 STAHL ROAD ORIENT, OHIO

PATENTS PENDING

For more details circle NED-9073 on enclosed inquiry slip

EXPANDED METAL FLOOR TRUCKS
two sizes are caster-mounted

Expanded metal bottom and sides welded to rigid angle iron frame forms construction of these floor trucks for wide variety of materials handling operations. Four ball bearing 4-in. fiber casters are centered front, rear and sides. Front and rear casters are swivel type. Model 4-A is 60 in. long, 30 in. wide and 30 in. high. Model 4-B measures 60 x 30 x 48 in. and has 22 x 57-in. hinged drop door on one side held in closed position by positive safety latches. This style provides approximately one-third greater capacity than model 4-A. Made by **Industrial Engineering & Mfg. Co.**, 501 Bliss St., Brimfield, Ind.

For more details circle NED-9074 on enclosed inquiry slip

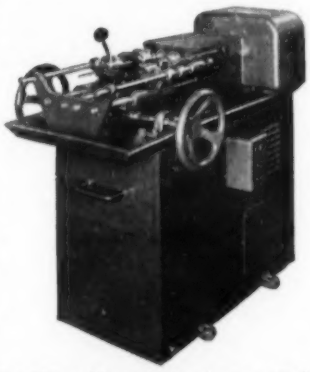
NONMETALLIC SHEATHED CABLE
has smooth nonflaking finish

Improved workability of RoFlex nonmetallic sheathed cable is afforded by gray finish which will not dust off or become tacky at high temperatures. Uniformly small in diameter, conductors have lightweight covering for easy stripping. Over-all braid of combined glass and presaturated yarn assures high resistance to rot and mold. Size, voltage and other identification is printed on surface. Made by **Rome Cable Corp.**, Dept. RF, Rome, N. Y.

For more details circle NED-9075 on enclosed inquiry slip

TWO-SPINDLE BOLT THREADER
for milled, upset or forged parts

Designed for rapid threading of screw blanks and similar parts, this two-spindle bolt threader can cut either right or left hand threads when so ordered. Spindles are driven through V-belts and change gears by 2-hp 1200-rpm motor located in base of machine. Machine will cut 6-in. long theads on blanks up to 24 in. long. Maximum threading capacity is 1-in. diameter straight threads and up to ¾-in. taper pipe threads. When proper length of thread is cut, adjustable stop engages fork fitted into spool of die and trips it automatically. Backward movement of wheel for extracting threaded pieces and loading blanks automatically closes die for next cutting. Made by **Kent Machine Co.**, 120 Portage Trail, Cuyahoga Falls, O.



For more details circle NED-9076 on enclosed inquiry slip

FERNO
(Trademark)

1000° F. HIGH HEAT ALUMINUM COATING

- **Protects metal subjected to heat up to 1200° F.**
- **Withstands expansion-contraction extremes.**
- **Conserves heat when used on or in ovens.**
- **Protective Aluminum is fused, by heat, to metal surface.**
- **Easy to apply by brush, spray or dip.**
  - **One gallon protects up to 500 sq. feet of metal.**

FERNO 1000° F. HIGH HEAT ALUMINUM COATING is excellent for protecting steel stacks, flues and ducts, smoke breechings, uptakes, motor exhausts, manifolds, boiler fronts, fire doors, generator shells, diesel engines, blast furnaces, locomotive fronts and all metal surfaces and pieces of equipment constantly subjected to high temperatures.

FERNO pays for itself many times. Prove this by taking advantage of our liberal trial offer. Order 5 gallons on approval ($6.25 per gal. -FOB Phila.). Try 1 gallon. If not completely satisfied, return balance, freight prepaid, within 30 days and we will cancel the invoice. (Single gallons for test purposes $6.50 FOB Phila.).

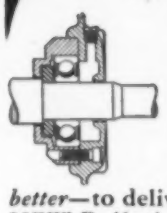
Protect your equipment! Mail your trial order today.

Department 5
SERVICE INDUSTRIES
2103-05-07 E. Somerset St., Phila. 34, Pa.

For more details circle NED-9077 on enclosed inquiry slip

YOU can check them!

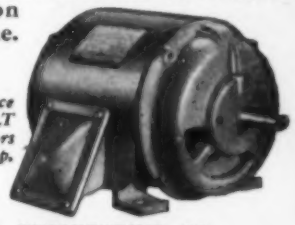
15 REASONS WHY the RELIANCE® Pre-lubricated Bearing Design is BEST!



The Reliance Pre-lubricated Bearing Design has all of the features vital to maximum motor life. Get proof of this additional way that all Reliance PRECISION-BUILT Motors are made *better*—to deliver dependable power longer! Write for NEW Bulletin B-2201 which features a convenient chart on which you yourself can check the 15 reasons why the Reliance Precision Bearing Design is the BEST one.

RELIANCE Precision-Built MOTORS

Reliance PRECISION-BUILT A-c. Motors from 3/4 to 300 hp.



RELIANCE ELECTRIC & ENGINEERING CO.
1082 IVANHOE ROAD CLEVELAND 10, OHIO
Sales Representatives in Principal Cities

"All Motors are NOT Alike"

For more details circle NED-9078 on enclosed inquiry slip

Get BETTER Control with POWERS FLOWRITE VALVES

VALVE TOP—Durable moulded neoprene diaphragm (1) has positive sealing bead which provides increased sealing action with increasing control pressure. Efficient diaphragm form insures ample and constant operating power thru full travel. Piston Plate Assembly (2) has a free floating thrust plate which absorbs side thrust. Closely guided piston plate maintains stem in accurate alignment.

ADJUSTING SCREW—Ball bearing non-rising type with starting pressure adjustable from 0 to 17 psi. Has enclosed rust proofed steel spring for full travel in 5 or 10 psi. control pressure change.

BONNET ASSEMBLY—Polished stainless steel stem in preformed lubricated metallic packing insures long life and low hysteresis.

VARIETY of VALVE BODIES
Sizes ½" thru 8"
For line pressures below 250 psi. Rugged construction to withstand piping strains.
Write for Circular FMV

Reduce Maintenance with FLOWRITE VALVES

THE POWERS REGULATOR COMPANY
2740 Greenview Avenue, Chicago 14, Illinois
Established 1891 • Offices Over 50 Cities • See Your Phone Book

For more details circle NED-9079 on enclosed inquiry slip

HOW TO TAME STAINLESS STEELS

When it comes to joining stainless steels, EASY-FLO makes them sit up and purr like kittens. For example, the air tube shown is made of 4 different types of stainless. Outer tube is type #302—small drain bushings are #303—inside bracket is #310—large bushing inside the flange is #416. The low-temperature silver alloy EASY-FLO readily joins them—and does it fast and economically.

GET DETAILS IN THIS ARTICLE

It tells how to join stainless steels with EASY-FLO and gives technical findings of our Research Laboratory on the subject. Write for "the stainless steel reprint" today.

HANDY & HARMAN 82 Fulton St., New York 7, N. Y.
Agents in Principal Cities. In Canada: HANDY & HARMAN of Canada, Ltd., Toronto

For more details circle NED-9080 on enclosed inquiry slip

Too Bulky to Manhandle?

Move them the cost-saving conveyor way

ALVEYORS

ALVEY CONVEYORS

Alvey Engineered Package Conveyors take over bulky jobs as well as weighty ones to speed up package movement in every department. Whether it's in the largest bleachery in the world (as shown above), or in many types of plants of varying sizes, *Alveyors* replace manhandling for savings that are large enough to affect competitive pricing of the finished product. Write for details.

ALVEY Engineered... PACKAGE CONVEYING

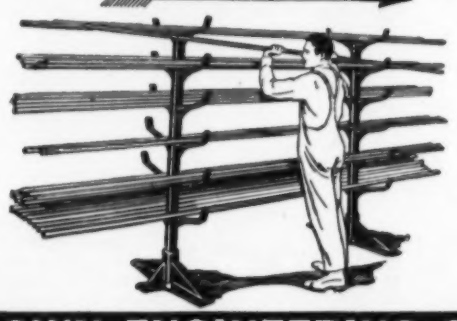
ALVEY CONVEYOR MFG. CO.
P. O. BOX 3031
St. Louis 24, Missouri • Sales Offices in Principal Cities

For more details circle NED-9084 on enclosed inquiry slip

SPEEDS UP STOCK-ROOM SERVICE

The BROWN TIME-SAVING RACK saves the time previously lost end-hauling each bar of stock its entire length from the old-style, closed-side Rack, the Brown Rack requiring but a few inches of side movement. Each length, width and thickness of stock is displayed in goldfish visibility for instant selection. Workmen waiting for stock are served without waste of time, and returned to their production machines to turn out a maximum of output. Any time you require additional storage space, all you need do is to add more units. If you want to relocate it at any time, you can do so for it is unattached to the building. It is a simple, durable article made of metal in five styles. It can't burn, warp, sag or twist: depreciation is practically nil. SEND FOR BULLETIN No. 26-D DESCRIBING—

BROWN'S *QUICK-SERVE* RACKS



BROWN ENGINEERING CO.
129 N. THIRD ST. READING, PENNA.
RACKS • VISES • CLUTCHES • COUPLINGS

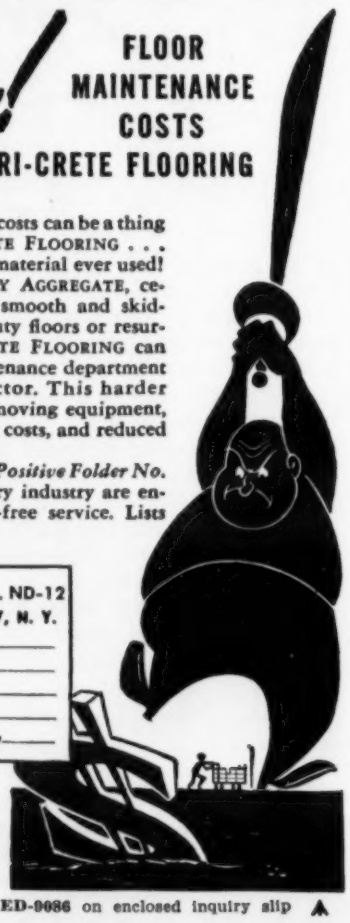
For more details circle NED-9085 on enclosed inquiry slip

Slash...! FLOOR MAINTENANCE COSTS with EMERI-CRETE FLOORING

Floor repair and replacement costs can be a thing of the past with EMERI-CRETE FLOORING . . . the toughest, hardest flooring material ever used!

Made of CORTLAND EMERY AGGREGATE, cement and water, it is hard, smooth and skid-proof. Ideal for new heavy-duty floors or resurfacing old ones — EMERI-CRETE FLOORING can readily be laid by your maintenance department or accredited local contractor. This harder smoother floor means easier-moving equipment, lower handling and operating costs, and reduced accidents.

Write for our FREE Proof-Positive Folder No. 601. Read how plants in every industry are enjoying years of maintenance-free service. Lists users, many installations.



Walter Maguire Co., Inc., Dept. ND-12
60 East 42nd St., New York 17, N. Y.
Name
Title
Company
Address
City Zone State

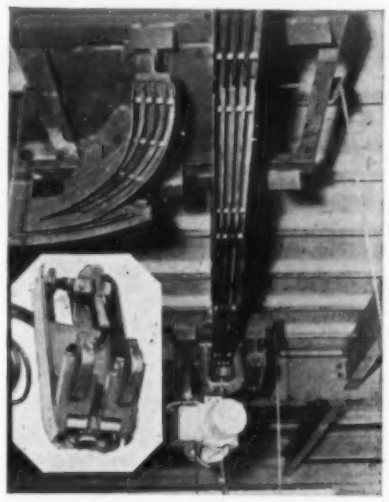
6583

EMERI-CRETE FLOORING

For more details circle NED-9086 on enclosed inquiry slip

TRAMRAIL ELECTRIFICATION shielded type for three-phase 600-v operation reduces arcing or flashing

Installed directly below tramrail track tread, Ohio shielded electrification system affords complete protection from electrical hazards commonly encountered with open unprotected conductor bars. Chance for casual contact is minimized by combining under-the-track location with compact 16-gage sheet metal housing which shields conductor bars from top and two sides. Since housing is open only at bottom, it prevents dust accummulation and danger of fire from flashover and, on outside installations, protects bars from rain and ice formation.



Insulated conductor bars are supported in metal shield by phenolic resin linen-impregnated tubing on through-steel ¼-in. rivets and are symmetrical about track centerline. This permits trolley to be turned around in switching combinations while keeping current collector shoes aligned with bars. One collector with three shoes handles three circuits, and shoe-to-conductor bar contact is maintained by 9-lb pressure springs.

Systems are factory fabricated in 10-ft lengths for erection on job. Tack welds on 40-in. alternate centers are used to fasten sections to bottom of track, and splicing is accomplished by aluminum conductor bar couplings. Made by **Forker Corp.**, 2040 Random Rd., Cleveland 6, O.

For more details circle NED-9087 on enclosed inquiry slip

PRESSURE GAGE is protected by blowout disk

This Acragage solid-front pressure indicator utilizes firm cast web to back up dial and is covered in back by waterproof blow-out disk that is bonded to case with Buna N rubber seal. In event of bourdon tube rupture caused by overpressure, corrosion or other factor, disk relieves pressure in case from rear without fracture of glass lens. Relief pressure can be ½ or 3 psi. Removal of disk exposes entire mechanism for inspection or recalibration. Unit is available in range of sizes from 4½ to 10 in. in surface and flush mounting designs. It can be obtained with all types of bourdon tubes for ranges from 30-in. vacuum to 80,000 psi. Standard movements are either of stainless steel or nylon and stainless for high frequency pulsation service. Made by **Clapp Instrument Co.**, Dept. E, Webster, Mass.

For more details circle NED-9088 on enclosed inquiry slip

YOU GET *Accuracy*

WHEN YOU SPECIFY EX-CELL-O DRILL JIG XLD BUSHINGS

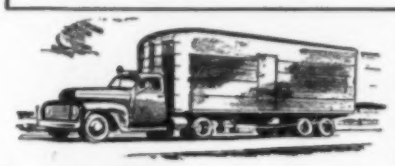
46—4

For years Ex-Cell-O has been known by American industry as headquarters for precision-made bushings . . . Ex-Cell-O carries one of the largest and most-varied stock of drill jig bushings available in the world.

EX-CELL-O CORPORATION • DETROIT 32, MICHIGAN

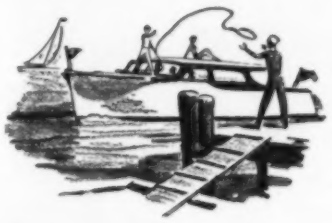
For more details circle NED-9089 on enclosed inquiry slip

How Production-Wise Manufacturers SAVE SANDING COSTS



ON LAND

The gleaming stainless steel that makes up these modern truck trailer bodies is polished with BONDITE* Jewelox paper belts. Because they cut faster, last longer, Jewel Abrasive Belts can roll up sanding savings for you!



ON THE SEA

Torn covers on drum sanders were causing costly slow-downs in finishing plywood sheets for this boat builder. AP Sales Engineer recommended change to super-tough Jewel Bondex Garnet Fibre. Builder reports, "These Jewel drum covers are the best ever!

*Moisture repellent and heat resistant.

Whatever your product, chances are you can cut costs — do better work like this — with Jewel Coated Abrasives. See your distributor or write us now!

Abrasive Products, Inc.

SOUTH BRAINTREE 85, MASSACHUSETTS • MAKERS OF JEWEL COATED ABRASIVES

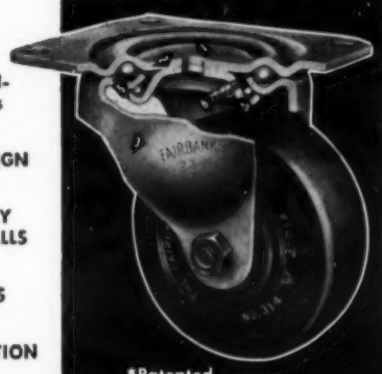
For more details circle NED-9090 on enclosed inquiry slip

NEW Fairbanks Series "23" Double Ball Race SWIVEL CASTER

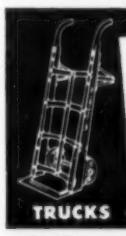
STRONGER ON EVERY POINT

The NEW Fairbanks Series "23" Double Ball Race Swivel Caster* line is designed for greater load carrying capacity in the medium duty field.

- NO KING-PIN it's eliminated!
- "LOCK-WELD" CONSTRUCTION retains perfect alignment!
- PATENTED LEG DESIGN resists distortion!
- LARGER SECONDARY RACEWAY AND BALLS work easier!
- COINED RACEWAYS improve with use!
- PRESSURE LUBRICATION reduces friction!



*Patented



THE Fairbanks COMPANY
393 LAFAYETTE STREET, NEW YORK 3, N. Y.
BRANCHES: Boston 10 • Pittsburgh 22 • New York 3 • Rome, Ga.

TRUCKS • VALVES • DART & PIC UNIONS • CASTERS

For more details circle NED-9091 on enclosed inquiry slip

Ten basic sizes with capacities from 30 Mbh to 490 Mbh. Totally enclosed motors.

nyb

COMET UNIT HEATER

Horizontal Type

Ceiling suspension type with heavy duty, welded steel, fin-and-tube heating element. (Extra heavy non-ferrous coils also available.) Suitable for continuous heating service on steam pressures up to 150 pounds or more.

Bulletin 485

Vertical, Projection Type Also Available

For efficient heating from high-ceiling areas—for door heaters over small openings—or where the horizontal type Comet Heater is not applicable. Ten basic sizes; capacities from 27 to 332 Mbh.

Bulletin 484

IUHA HEAT WITH UNIT HEATERS

nyb THE NEW YORK BLOWER COMPANY
GENERAL OFFICES • 32nd STREET & SHIELDS AVENUE • CHICAGO-16
FACTORIES AT LAPORTE, INDIANA AND CHICAGO, ILLINOIS

For more details circle NED-9092 on enclosed inquiry slip

MARK—

BUSHINGS, COLLARS, RODS DRILLS, HOUSINGS, TUBES, RINGS AND ANY ROUND, FLAT OR ODD SHAPED ITEM YOU CAN THINK OF WITH THE SERIES 9A MARKING MACHINES

HAND, MOTOR, OR AIR DRIVEN

Write today for Literature & Prices

The ACROMARK Company

7-11 MORRELL ST., ELIZABETH 4, N. J.

▲ For more details circle NED-9093 on enclosed inquiry slip ▲

STAMP—

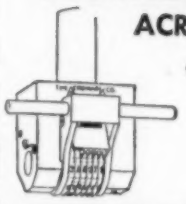
NAME-PLATES, TAGS, MACHINE PARTS AND PLATES WITH THE

Acromarker Stamping Machine

"IT COMES IN SEVERAL STYLES & SIZES"

NUMBER— CONSECUTIVE, DUPLICATE AND REPEAT WITH—

ACROMARK NUMBERING HEADS



—Write for Literature & Prices

The ACROMARK Company

7-11 MORRELL ST., ELIZABETH 4, N. J.

▲ For more details circle NED-9094 on enclosed inquiry slip ▲

World's Most Widely Used PORTABLE DIAL SCALE

This portable Toledo controls costs in a great variety of applications in business and industry. Sturdily built to withstand heavy usage and maintain precise weighing accuracy. Rapid automatic weight indication furnished by Toledo Double Pendulum Mechanism. Wide choice of dials. Capacities to 1600 lbs. Send for bulletin 2025. Toledo Scale Company, Toledo 1, Ohio.

Portable Scale for weighing at bench level heights. Shown with adjustable wheeled stand and with a packing house pan.

TOLEDO

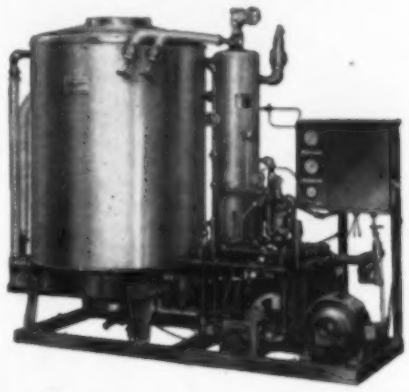
HEADQUARTERS FOR SCALES

▲ For more details circle NED-9095 on enclosed inquiry slip ▲

▲ For more details circle NED-9096 on enclosed inquiry slip ▲

PACKAGED STEAM GENERATORS gas, oil and combination-fired types have positive safety devices

Electronic control for gas burners and air interlock device to control automatically flow of gas provide positive safeguards in operation of these package steam generators. They are offered in 10, 15, 30, 50, 75 and 100-hp sizes. All units are complete and ready to operate after connection to fuel, water and electric lines. Fully automatic, they attain full steam within 5 minutes from cold start.

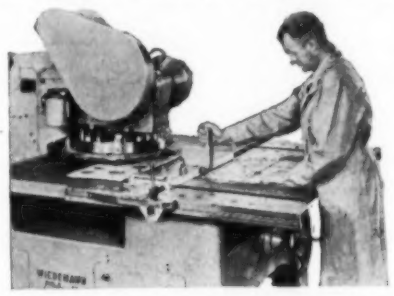


Air interlock is supplementary control on main gas valve to prevent flow of gas to burner during off cycle or in event of blower, electric current or motor failure. Interlock will not allow main gas valve to open if there is excess of gas pressure. Electronic control furnishes electric ignition, proves flame pilot, energizes solenoid coil to pass gas to burner and stops ignition spark after burner is ignited. If there is interruption or malfunction of any component during sequence, control automatically returns to first step. Safety shutdown occurs on either ignition failure or loss of flame. Made by **Clayton Mfg. Co.**, Steam Generator Div., Dept. N, P. O. Box 550, El Monte, Calif.

▲ For more details circle NED-9097 on enclosed inquiry slip ▲

TURRET PUNCH PRESS for high speed piercing work

Suitable for high speed piercing of electrical panels, radio and television chassis and switchboards, model RA-41P turret punch press combines pantograph for rapid hole location with turret for quick access to punches and dies. Turret of machine carries 16 to 20 different punches and dies up to 3-in. diameter in round, square, shaped or group types. Handwheel conveniently located to operator rotates turret to put any punch and die in piercing position. Work to be pierced is clamped to cross slide in proper relation to template in which ¼-in. diameter holes have been located accurately to correspond with center of each hole to be pierced in material. Press will accommodate sheets up to 24 x 40 in. at up to 15 tons pressure with 1⅛-in. stroke of ram which operates at 175 strokes per minute. Machine is powered by 1-hp 3450-rpm motor. Made by **Wiedemann Machine Co.**, Dept. 14, 4272 Wissahickon Ave., Philadelphia 32, Pa.



▲ For more details circle NED-9098 on enclosed inquiry slip ▲

SPEED UP SMALL PARTS ASSEMBLY

Parts feed automatically toward front—end reaching and fumbling.

Bins taper toward front to form convenient semicircle—keep all bins within easy reach.

Stacking, locking construction for rigid set-ups, easily changed when necessary.

All-welded construction. Smooth, folded edges.

New-design, adjustable hoppers provide increased capacity and permit regulated flow of parts according to sizes and weights.

Two-sizes—tapered or straight sides.

IMMEDIATE DELIVERY

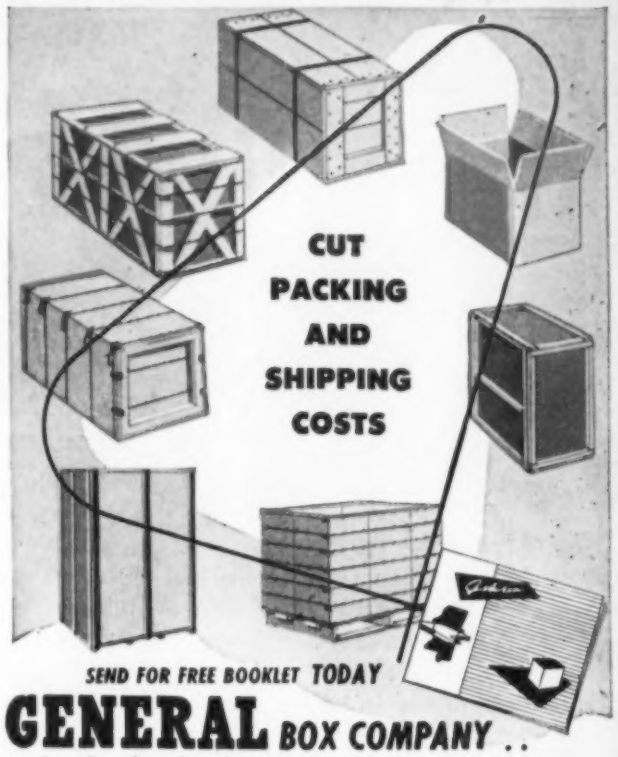
Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main Street, Pawtucket, R. I.

STACKBIN SYSTEM

"Stacked and Still Accessible"

▲ For more details circle NED-9099 on enclosed inquiry slip ▲



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GENERAL BOX COMPANY ..

★ ★ ★ ★ ★ engineered shipping containers

GENERAL OFFICES: Illinois & Dearborn Sts., Chicago 10, Ill.
DISTRICT OFFICES AND PLANTS: Cincinnati, Denville, N. J., Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, Sheboygan, Winchendon.
Continental Box Company, Inc., Houston, Dallas
General Box Company of Mississippi, Meridian, Miss.

▲ For more details circle NED-9100 on enclosed inquiry slip ▲

The Model H-100 Kwik-Serv Oil Changer is one of the products in a complete line of service and testing equipment manufactured by Allen Electric and Equipment Co. View looking inside oil changer shows oil pump and several SPEED CLAMPS in position. CLAMPS are attached by snapping around hose and pulling down to locked position with pliers.

SPEED CLAMPS*

PRODUCE

80% TIME SAVINGS

66% COST SAVINGS

FOR ALLEN ELECTRIC & EQUIPMENT CO., KALAMAZOO, MICH.

There is nothing like getting down to "shirt-sleeve" fundamentals when you are specifying fasteners. That's the way Allen Electric Equipment Co. feel about it...as you can see from the point-blank comparison made in an excerpt from one of their letters.

"We submit the following information comparing the Tinnerman SPEED CLAMP to a standard type clamp as applied to the production of our Model H-100 Kwik-Serv Oil Changer:

1. Tinnerman SPEED CLAMP ..... .0148 cents each
2. Standard type hose clamp ..... .0433 cents each
3. 15 Tinnerman SPEED CLAMPS per Oil Changer take 8 minutes for installation
4. 15 standard type hose clamps per Oil Changer take 40 minutes for installation

"Add to these comparisons the fact that SPEED CLAMPS have chalked up an excellent field performance record, and you'll understand why we are so enthusiastic about them."

Reports like this lead us to believe we can help you. We would welcome an opportunity to prove how SPEED NUT brand fasteners can improve your assembly cost picture. Ask your Tinnerman representative to call, and write today for your copy of "Savings Stories". TINNERMAN PRODUCTS, INC., Box 6688, Cleveland 1, Ohio.

*T. M. Reg. U. S. Pat. Off.

TINNERMAN Speed Nuts®

FASTEST THING IN FASTENINGS

▲ For more details circle NED-9101 on enclosed inquiry slip ▲

Little fellows DO THE BIG JOBS

Eastern Centrifugal Pumps are CLOSE-COUPLED and available in SPECIAL METALS. Over 100 models to choose from to pump from 0-70 psi, 0-70 gpm. Economical and trouble free.

FOR EASTERN'S NEW CENTRIFUGAL CATALOG 100, WRITE TO DEPT. AH

Eastern Industries Inc.
296 Elm St., New Haven, Conn.

▲ For more details circle NED-9102 on enclosed inquiry slip ▲

the smooth ride costs less

Mono-Cushion
INDUSTRIAL VEHICLE TIRES

TOUGH ALL THE WAY THROUGH
CUSHION ALL THE WAY THROUGH

Easy-riding Mono-Cushions will save you plenty of money on repairs, cut vehicle downtime. These big, burly tires soak up more bumps and jolts than any other type of industrial tire, size for size. They greatly reduce maintenance on steering linkages, bearings, transmissions, universals, differentials—wherever shock or shock load is a factor.

Mono-Cushions will save you money in other ways, too. Your tire costs will be lower, for one thing. And Mono-Cushions will reduce load breakage and floor wear. Incidentally, your drivers like the easy ride and easy steering they get with Mono-Cushions.

The leading manufacturers of industrial vehicles use Monarch Mono-Cushions as original equipment. Replacement tires available through the manufacturer of your equipment or his distributors.

THE MONARCH RUBBER COMPANY
200 LINCOLN PARK HARTVILLE, OHIO

SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

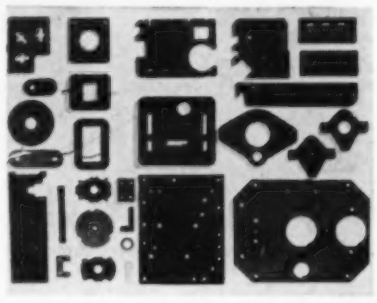
▲ For more details circle NED-9103 on enclosed inquiry slip ▲

SPEED REDUCERS of horizontal right-angle-drive type

Illustrated T series horizontal right-angle drive Reductors are heavy-duty addition to line of speed reducing equipment. Construction features worm integral with shaft, heavy gears, iron housing and steel shafts. Gear ratios range from 1:1 up to 4000:1. Output speeds, based on full-load motor speeds, are from 0.45 to 588.23 rpm. Made by **Boston Gear Works,** 69 Hayward St., Quincy 71, Mass.

▲ For more details circle NED-9104 on enclosed inquiry slip ▲

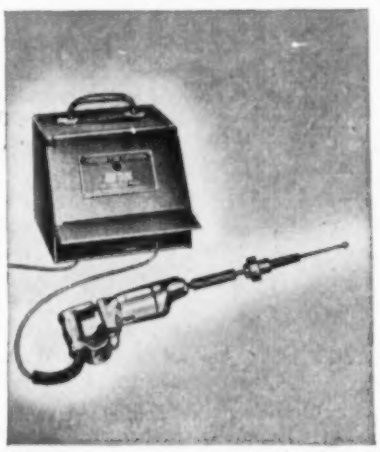
NONMETALLIC STAMPINGS in sizes up to 9 x 12 x 1/8-in.



Short-run stampings of phenolic resins, vulcanized fibers, plastics, insulation paper and other nonmetallic materials have been added to company's line of custom services. Typical stampings made to specifications include radio and electronic frames, insulators, spacers, panels, gaskets and cams. They can be obtained in any quantity from 3 to 2000 pieces. Service available from **Federal Tool & Mfg. Co.,** Dept. NED, 3600 Alabama Ave., St. Louis Park, Minneapolis 16, Minn.

▲ For more details circle NED-9105 on enclosed inquiry slip ▲

TUBE ROLLING CONTROL is simplified electric unit



Having only two electrical working parts, John Crane control for precision rolling of both ferrous and nonferrous tubing is shockproof - mounted and enclosed in heavy aluminum cabinet. Dial settings on control panel are calibrated over wide range of sizes and gages. Expanding gun is plugged into control unit, setting is made, and when tube is rolled to exact degree, control cuts off motor. Expanding gun motor automatically reverses when pressure on handle is released so that expander can be withdrawn from rolled tube end easily. Over and under expanding, tube end thinning and radial and hoop stresses in tube sheet are minimized. Made by **Crane Packing Co.,** Dept. F-25, 1800 Cuyler Ave., Chicago 13, Ill.

▲ For more details circle NED-9106 on enclosed inquiry slip ▲

NEW! DODGE SLIDE-SET VISE

Cut away view

SLIDES IN "NEUTRAL"!
INSTANT ACTION!
GRIPS CONVENTIONALLY!
FULL POWER!

● Entirely new in principle, with patented fast slide action that speeds work, reduces operator fatigue, saves wear on parts. All the power of a heavy conventional vise (weighs 58 pounds). Jaw slides in "neutral" before you lock it by turning handle in conventional way. No tedious "spinning" in and out. No-Pinch handle protects against blood blisters. Every Dodge Slide-Set pays dividends in greater efficiency and production. *Write now for free Bulletin.*

Dodge Manufacturing Corporation, 2100 Union St., Mishawaka, Indiana

DODGE of Mishawaka, Ind.

▲ For more details circle NED-9107 on enclosed inquiry slip ▲

For your high stress Fastening Jobs use Cleveland's *EXTRA STRONG* High Carbon Heat Treated Cap Screws

● Fasteners of great strength and uniform accuracy, made by the Kaufman *Double Extrusion* Process: Complete range of sizes, diameters from ¼" upward. Write for our monthly stock list.

CLEVELAND *Top Quality* FASTENERS

THE CLEVELAND CAP SCREW COMPANY
2917 EAST 79TH STREET • CLEVELAND 4, OHIO
Warehouses: Chicago, Philadelphia and New York
Ask your Jobber for Cleveland Fasteners

▲ For more details circle NED-9108 on enclosed inquiry slip ▲

HAPMAN TUBULAR, CHAIN OR CABLE CONVEYORS

FOR FLOWABLE MATERIALS

SOLVED! A DIFFICULT CONVEYING PROBLEM

U. S. PATS. & PATS. PEND.

Here, the problem was how to make completely automatic, the removal of dry cast iron chips from the base of 2 profile milling machines in the International Harvester truck engine plant at Indianapolis. Hapman Conveyors job-engineered the installation shown; it operates (1) in 2 planes and 2 directions, (2) without transfer points, (3) requires minimum clearances and (4) few structural supports.

These are but 4 of the 45 difficult conditions now being met successfully by Hapman job-engineered Conveyors. Send for the Hapman catalog showing them in detail and listing the many types of flowable materials handled.

National Sales Offices in Thomas' and MacRae's

HAPMAN CONVEYORS, Inc. 630-f GIBSON STREET
Division HAPMAN-DUTTON COMPANY • KALAMAZOO 6, MICH.

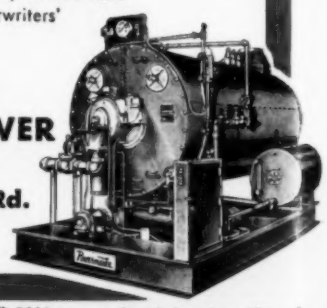
▲ For more details circle NED-9109 on enclosed inquiry slip ▲

Cut Steam Costs!

ORR & SEMBOWER *Powermaster*® STEAM GENERATORS

15 to 500 H.P. at pressures to 200 p.s.i.—for light oil, heavy oil, gas or combination gas-oil firing —give you cost-cutting features like these . . .

- Low fuel consumption through high efficiency
- Packaged design saves excessive installation costs
- Automatic operation frees engineer for other duties
- Mounted on steel base—no bricking required
- Delivered fully wired and factory-tested
- Widespread service by factory-trained men
- A.S.M.E. constructed—Underwriters' Laboratories approved



Get Catalog — Write
ORR & SEMBOWER INC.
930 Morgantown Rd.
Reading, Pa.

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Michigan CUTS GEAR COSTS Again!

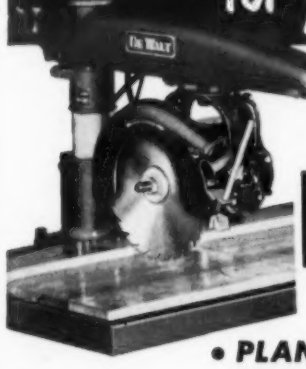
On Michigan's improved 870 gear finishers, loading time is reduced to 2½ secs. by passing a conveyor right THROUGH THE MACHINE. The conveyor carries each gear into position, stops just long enough for precision finishing, carries the gear on to the next operation. Clusters are finished by passing the same conveyor through a battery of 870 machines.

from blank to finished gear

MICHIGAN TOOL CO.
7171 E. McNICHOLS RD., DETROIT 12, U.S.A.

For more details circle NED-9111 on enclosed inquiry slip

the No.1 money saver for your plant



DEWALT

gives you more work for your money in:

- PLANT MAINTENANCE
- PATTERN SHOPS
- CRATING AND BOXING

This versatile, all-purpose DeWalt is never idle! In *your* plant, it can take care of all your woodworking needs—quickly, accurately and safely. It is *many* machines in one! Simply by changing the cutting tool, you have another machine! Write for catalog. DeWalt, Inc., 1212 Fountain Avenue, Lancaster, Penna.

DEWALT A subsidiary of American Machine and Foundry Co.

For more details circle NED-9112 on enclosed inquiry slip

TRUSCON STEEL BOXES just say "Truscon"...

and there's the *box* you need!

Truscon has scores of different types of steel boxes and skids to meet a wide range of materials handling requirements. And if your needs are something special, Truscon has the engineering ability to tailor-make the exact units you require. Truscon's long experience in steel box and skid design...Truscon's highly efficient facilities for production and service...Truscon's long association with box users in every branch of materials handling... these are *plus* features that make your dollar investment in Truscon Steel Boxes and Skids so much more profitable. Write for catalog.

TRUSCON STEEL COMPANY
PRESSED STEEL DIVISION • 6100 TRUSCON AVENUE • CLEVELAND 4, OHIO
SUBSIDIARY OF REPUBLIC STEEL CORPORATION

For more details circle NED-9113 on enclosed inquiry slip

PORTABLE VACUUM CLEANER
small machine has heavy-duty advantages of larger units

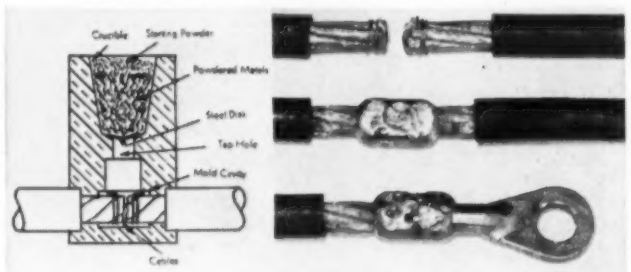
Powered by 1½-hp electric motor, Hoff-co-Vac small portable vacuum cleaner will operate 35-ft length of hose. Compact construction permits practically unlimited maneuverability in narrow aisles or congested areas. Multiple-stage centrifugal vacuum producer has housing and impellers of aluminum with latter balanced both dynamically and statically. Unit can be equipped with standard open type motors or with explosionproof motors for use in hazardous locations.

Dust container which has adequate capacity for continuous service is released by quick-acting lever and has handles for ease in emptying. Four inverted type filter bags serve as dust separator. Design is such that heavier and larger quantities of dust are separated out immediately by centrifugal action. Roller bearing wheels and casters are fitted with rubber tires. Permanently lubricated ball bearings are employed. Motor and vacuum producer are supported on floating mounts to eliminate vibration. Made by **U. S. Hoffman Machinery Corp.**, Air Appliance Div., 101 Fourth Ave., New York 3, N. Y.

For more details circle NED-9114 on enclosed inquiry slip

SPLICE WELDER
joins cable, connectors and lugs

Consisting of clamp-type crucible, spark gun and cartridge charge, Cadweld cable welder makes compact permanent splices in less than 1 minute. Powdered copper



oxide and aluminum are dumped into small graphite crucible and ignited by means of spark. Molten copper flows over stripped cable ends in graphite mold and fuses them together in solid homogeneous nugget of 98 per cent copper with cross-section 50 per cent greater than cable. Joint formed is not damaged by excessive overload and is not subject to gradual loosening or oxidation. Taped splice is only 3 in. long. Two sizes of welder are available: model 263 which handles 1/0 and 2/0 cable and model 262 which handles 3/0 and 4/0 cable. Made by **Erico Products, Inc.**, 2072 E. 61st Place, Cleveland 3, O.

For more details circle NED-9115 on enclosed inquiry slip

Accurate "know how"

SPRINGMAKING "know how"—and, of course, modern manufacturing facilities—can mean a lot to spring users. The three springs illustrated are good examples of how Accurate can slash spring costs with modern methods. Where previously multiple operations were required in the manufacture of these springs, Accurate produces each in a single operation at a unit price of a fraction of a cent!

We'd like to show those of you who are users of large quantities of springs how we can cut *your* costs. Write or call today.

ACCURATE SPRING MFG. CO.
3805 W. Lake Street Chicago 24, Illinois
Ask for the Accurate Spring handbook

Springs Accurate Springs Wire Forms • Stampings

For more details circle NED-9116 on enclosed inquiry slip

SAVE TIME! do your engraving * in your OWN SHOP

WITH THE TRACER GUIDED Engravograph

the Only * PANELS • TOOLS DIALS • NAMEPLATES PORTABLE ENGRAVER WITH THESE FEATURES

- Engraves 15 sizes from ONE alphabet
- Covers a LARGER area than any other portable
- Equipped with self-centering holding vise
- Convertible into TRACER GUIDED ELECTRIC ETCHER for identifying tools and dies

Department 26

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13-19 UNIVERSITY PLACE • NEW YORK 3, N. Y.
The world's largest manufacturer of portable engraving machines

For more details circle NED-9117 on enclosed inquiry slip

NO NEED FOR WIDE AISLES

Thousands of square feet CAN BE TAKEN FROM AISLES, to INCREASE STORAGE AREA by Palletizing with a MOTO-TRUC

TURNING RADIUS OF OTHER MAKES — SMALLER TURNING RADIUS OF THE MOTO-TRUC

By palletizing with Moto-Trucs, Thompson Products Company has been able to use about 25,000 fewer square feet of floor area to do the same job of warehousing.

Moto-Trucs are 18" to 20" shorter than other makes, due to most compact power unit.

Powerful motors. 12-volt for level operation, 18-volt for ramp operation.

Moto-Trucs are the easiest and safest to operate.

Patented articulating hinged spring unit holds drive wheel down on floor for better traction.

Write for Bulletin No. 50, and Specifications.

One of Moto-Telescopic Hi-Lift Trucks at Thompson Products Company, Cleveland.

HI-LIFT, PALLET, PLATFORM TRUCKS, ETC.

The MOTO-TRUC Co.
1953 E. 59th Street
CLEVELAND 3, OHIO.
Originators and world's largest exclusive manufacturers of motorized, battery operated walkie type trucks

For more details circle NED-9118 on enclosed inquiry slip

A typical Hackney Shell—a WATER TANK for use on concrete mixers and pavers. Sizes up to 110 gal. capacity.

Numerous metals have been employed in the manufacture of Hackney Deep Drawn Shapes and Shells, including: steel, stainless Steel, Monel metal, nickel, aluminum, magnesium, Herculoy, Everdur, bronze, copper and various alloys.

But no matter what metal is used in making a Hackney Deep Drawn Shell or Shape, users gain many exclusive advantages: decreased overall weight, greater strength, faster production, elimination of expensive machining operations, greater durability, improved appearance, lower costs.

Pressed Steel Tank Company engineers will be glad to work with you in adapting special shapes—to improve existing products—to develop new products. Write for full details.

Hackney

PRESSED STEEL TANK COMPANY

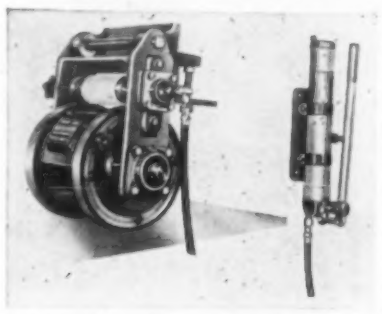
Manufacturers of Hackney Products

Main Office and Plant: 1450 South 66th Street, Milwaukee 14
1324 Vanderbilt Concourse Building, New York 17 • 255 Hanna Building, Cleveland 15 • 936 W. Peachtree St., N.W., Room 136, Atlanta 3 • 208 South LaSalle Street, Room 779, Chicago 4 • 578 Roosevelt Bldg., Los Angeles 14

CONTAINERS FOR GASES LIQUIDS AND SOLIDS

For more details circle **NED-9122** on enclosed inquiry slip

STRIP STOCK PRINTER
ink feed system is semiautomatic to permit production imprinting



Marking of strip steel, sheets, wallboard, nonferrous stock or any other strip or board material is performed automatically with this No. 216 printer. Either permanent or water-soluble ink is fed regularly from pressure ink reservoir so that continuous production runs are possible. Machine can be mounted directly on mill for marking in the flat or on coil with up or down wind. Rubber-covered steel tires contact moving surface of strip or sheet stock on production line and this drives printing roll at same speed as stock. Copy is imprinted on stock by rod style interchangeable type or by molded rubber brass-backed dies that carry any desired pattern or trademark. Since copy moves at same speed as strip or sheet stock, clear unsmudged imprints are obtained.

Features include balanced heavy duty construction, ball-bearing mounted ink and printing rolls to minimize friction and wear, rubber tires which will not damage stock and manually operated pump with 28-oz reservoir to feed ink to roll while machine is operating. Wide range of colors and types of inks can be supplied to suit needs of application. Printing cylinder has circumference of 37 in. at die face, and maximum die size which can be used is 5 x 6 in. Made by **Jas. H. Matthews & Co.**, 3943 Forbes St., Pittsburgh 13, Pa.

For more details circle **NED-9125** on enclosed inquiry slip

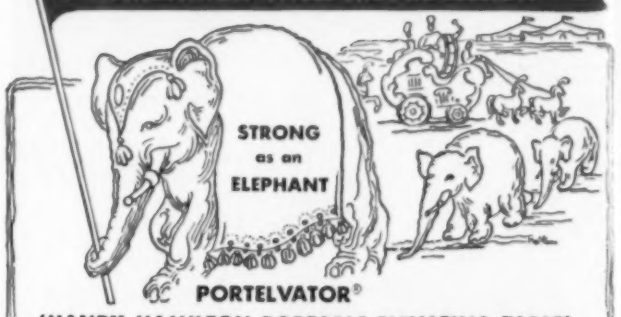
INDUSTRIAL CRANE
for various yard lifting operations

Capacity of model 20 heavy-duty crane is 6 tons at 10-ft radius with standard counterweight and 10 tons with outriggers extended and auxiliary counterweight. It will accommodate up to 39-in. magnet and ½-yd clamshell or dragline bucket. Gasoline or Diesel engine supplies motive and operating power. Mounted on four sets of dual pneumatic tires, crane travels at speeds up to 15 mph. It travels, lifts, booms and swings simultaneously or independently. Four-point 'walking' beam suspension provides equal stability while lifting or digging even on rough terrain. Operation in limited space is facilitated by short turning radius, 92-in. wheelbase and 360-degree swivel. Made by **American Steel Dredge Co.**, Wayne Crane Div., 2512 Taylor St., Ft. Wayne 1, Ind.

For more details circle **NED-9126** on enclosed inquiry slip

JOIN THE PARADE
OF PROFIT-THROUGH-OPERATING-ECONOMIES

PORTELVATOR® PACES THE PROCESSION



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(HANDY HAMILTON PORTABLE ELEVATING TABLE)

SPECIAL

A Handy Hamilton Elevating Table, especially designed and built for your particular application, will "cost" you nothing, for it will pay for itself in savings. Case histories show, "production increased 45% — overhead reduced 30%"—"$2250.00 table paid for itself in four months"—"paid for itself in 45 days — now have nine, purchased one at a time out of savings effected."

LEARN THE PENNY PINCHING PARTICULARS
WRITE FOR BULLETIN P-50

THE Hamilton TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

For more details circle **NED-9128** on enclosed inquiry slip

FRACTIONAL HORSE POWER

Gears...

INTERNAL, HELICAL, SPUR ELLIPTICAL, WORM and WORM GEARS. BEVELS, RATCHETS and SPROCKETS.
PRECISION WITH VOLUME PRODUCTION
Send for Bulletin

Rynel Corporation
302 MILLER ST. STERLING, ILLINOIS

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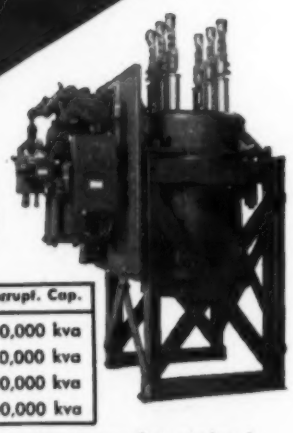
FOR 100,000 TO 500,000 KVA INTERRUPTING CAPACITY

Specify

ALLIS-CHALMERS TYPE DZ INDOOR OIL CIRCUIT BREAKERS



Rated KV	Rated Amps.	Interrupt. Cap.
7.2	600, 1200, 2000	100,000 kva
13.8	600, 1200	150,000 kva
13.8	1200	250,000 kva
13.8	1200, 2000	500,000 kva

CONTACT DESIGN gives you the advantages of single-break *Ruptor* interrupting device... long-lasting special alloy arcing contacts...self-cleaning, silver plated main contacts.

Automatic or manual trip. Solenoid closing. Fully tested at factory, shipped complete, ready to install.

Can be used in existing cell structures where increased capacity is needed. Bulletins 71B6129D and 71B6179C.

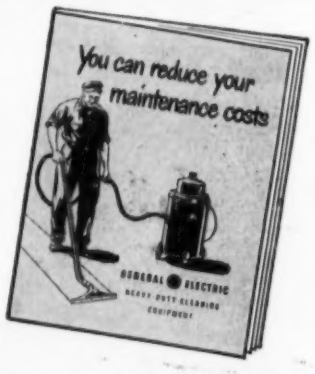
Ruptor is an Allis-Chalmers trademark. A-3011

ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

For more details circle **NED-9123** on enclosed inquiry slip

Want to cut down on cleaning costs?



Send for this new book which shows and describes the latest DUAL-ACTION, Heavy-duty G-E Cleaners.

Get the facts. See for yourself HOW and WHY modern, high-vacuum, BLOWER-SUCTION G-E Machines can cut cleaning time and help save money. Read about the powerful new G-E Cleaner that weighs only 23½ lbs. Learn how G-E Cleaners are quickly adapted for WET pickup . . . the clean, fast, modern way to take up mop water . . . and suck up puddles when toilets and washbowls overflow.

MAIL TODAY

GENERAL ELECTRIC COMPANY, Dept. 22-2621
1285 Boston Ave., Bridgeport 2, Conn.
Certainly, I am interested in Saving Cleaning Dollars—let me have your Folder by return mail.

NAME.....
FIRM.....
ADDRESS.....
CITY.....ZONE.....STATE.....

GENERAL ELECTRIC

For more details circle **NED-9124** on enclosed inquiry slip

TO INSURE PROMPT DELIVERIES...

"STANDARD" RECOMMENDS *STANDARDS*

You can depend on prompt deliveries of UNBRAKO Products when you use *standard sizes*.

For, despite shortages, stepped-up demand and other problems of the emergency, we've been able to keep full stocks of UNBRAKO "*standards*" on our dealers' shelves—ready for immediate delivery.

And that's not all... Every time you use a *standard size* UNBRAKO it represents a substantial saving over the cost of a "special."

Be sure you have our latest catalog of UNBRAKO *standard* products. Send for your copy of Bulletin 643-R *today*.

SOCKET UNBRAKO SCREWS

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24, PENNSYLVANIA

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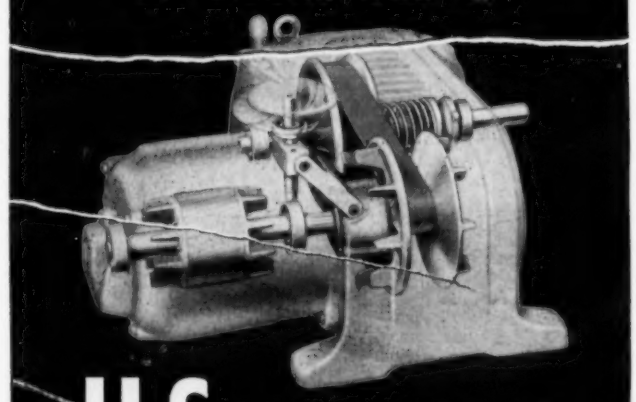
GET 10 HOURS WORK IN 8



U.S. VARIDRIVE MOTOR — *1 to 10,000 R.P.M.*

PRECISELY THE RIGHT SPEED FOR EACH AND EVERY OPERATION INSTANTLY

Ask for Descriptive Bulletin

U.S. ELECTRICAL MOTORS, Inc.
Los Angeles 54, Calif. Milford, Conn.

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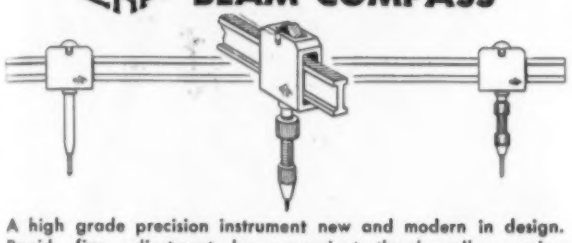
ERA COMBINATION SQUARE TRAMMEL HEADS

Use on your scale or combination square to make accurate compass, height gage, inside and outside calipers and scriber. Hundreds of uses. Complete with chrome plated heads, scriber points, pencil tips, special caliper points. Used by craftsmen in every type of industry. $2.95 per set.

ERA BEAM COMPASS



A high grade precision instrument new and modern in design. Rapid, fine adjustment by convenient thumb rollers—spring loaded friction surfaces—no screws. Lead expeller. Lies flat, prevents damage to drawings and other instruments. Made of anodized aluminum alloy, satin finish for durability and appearance. Beam lengths from 7" to 100" and pen slides nationally available. Accept no substitutes.

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BURKE No. 4 UNIVERSAL

A versatile, precision, small Milling Machine at a very low price

Power or hand feed. Use on bench or pedestal. Send for complete information on various model Burke millers and attachments.

The BURKE MACHINE TOOL Co.

A Division of U. S. Burke Machine Tool Co.

East 72nd Street Cincinnati 16, Ohio

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A.W. SUPER-DIAMOND FLOOR PLATE

Puts Safety Where Accidents Begin

This 16-page Catalog tells all about A.W. Super-Diamond Floor Plates. Send for your free copy today.

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A.W. SUPER-DIAMOND

FLOOR PLATES THAT GRIP

A PRODUCT OF

ALAN WOOD STEEL COMPANY

Conshohocken, Pa.

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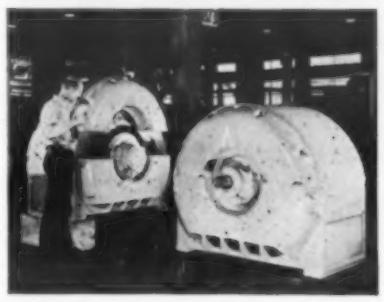
INDUCTION MOTORS

large squirrel-cage models are available in sizes up to 1350 hp



Greater accessibility and protection are features of redesigned standard line of squirrel-cage induction motors of four or more poles. Capsule-type sleeve bearings are employed, and split cast-iron bearing capsule or housing has machined flange for bolting to bearing bracket. Design permits removal of upper half of bracket for inspection or cleaning without exposing inside of bearing. Air-discharge openings in side of stator yoke, protected by removable louvers, facilitate vacuum cleaning or blowing out air passages behind stator core.

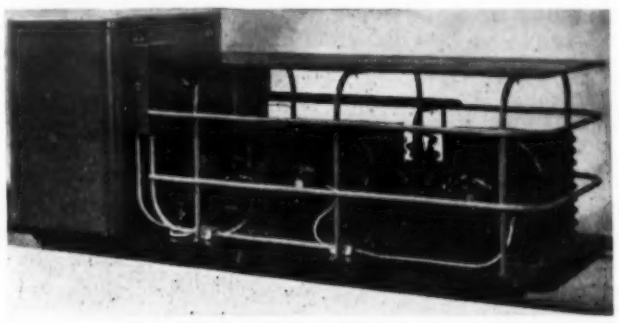
Brackets also afford effective protection for ends of motor and help make standard design dripproof. Bracket-bearing squirrel-cage construction is standard for ratings up to 1 hp per rpm. However, for steady nonoverloading drives such as centrifugal pumps and blowers, bracket-bearing construction can be used for ratings up to approximately 1.5 hp per rpm for motors in high-speed class up to 900 rpm. Motors are available with special electrical modifications to suit application requirements. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

For more details circle NED-9134 on enclosed inquiry slip

INDUSTRIAL CHILLING UNIT

10-cu ft size for —120° F service

Conforming to recent government low temperature test requirements, model R-120 industrial chilling unit is insulated with Santocel and is refrigerated by two refrig-

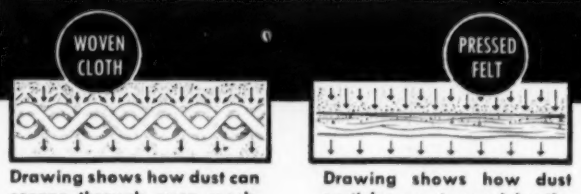


eration units in cascade. It has thermal capacity of 2000 Btu per hour at −120° F which is ample to meet requirements necessary for complete stabilization of metals, heat treatment of steels and shrink fitting applications. Use of this unit for stabilization of gages has enabled tolerances of 0.000001-in. to be maintained without concern over future growth or warping. Shrink fit work has been simplified by chilling of male pieces rather than subjecting female components to high temperatures which can cause distortion and warpage. Made by **Deepfreeze Distributing Corp.**, Sub-Zero Products Div., 3928 Reading Rd., Cincinnati 9, O.

For more details circle NED-9135 on enclosed inquiry slip

IT MUST BE FELT

To Be Efficient in Dust Collection



Drawing shows how dust can escape through open mesh.

Drawing shows how dust particles are trapped by the density of the felt while air flows through in constant volume.

Let us send you comparative photo-micrographs showing that even the split-micron dust particle will not penetrate the microscopic pores of the cylindrical bag of special felt in a MIKRO-COLLECTOR.*

Moreover, the bag is kept constantly clean by the Hersey automatic, reverse-jet cleaning ring which flexes the bag while moving up and down its outer surface—thus assuring free airflow, phenomenal filter rates and far higher capacity per given area of filter fabric.

Put these two features together and you have the reason why a MIKRO-COLLECTOR not only TURNS YOUR DUST INTO DOLLARS but stops those many dollar losses due to inadequate dust control.

SEND FOR *actual sample of felt that makes the MIKRO-COLLECTOR so outstanding . . . also case histories revealing dollar and cents savings through its use.*

*Patents applied for by H. J. Hersey, Jr. and Pulverizing Machinery Company

PULVERIZING MACHINERY COMPANY

28 Chatham Road Summit, New Jersey

PRESERVE OUR HERITAGE: FAITH, FREEDOM and INCENTIVE

MIKRO-COLLECTOR

By the makers of MIKRO-PULVERIZERS and MIKRO-ATOMIZERS

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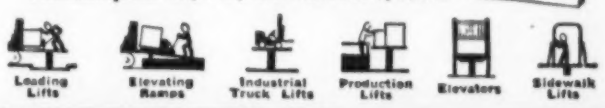
GLOBE Self-Leveling RAMP

CUTS LOADING TIME . . . On your loading dock, this Globe Self-Leveling Ramp can speed up loading or unloading 50%. Ramp adjusts to any truck height . . . platform lip rests and rides firmly on truck floor. Goods are moved in and out quickly, easily, with less breakage. Easily installed. Pays for itself in short time.

Write for Illustrated Bulletin N 1250

GLOBE HOIST COMPANY

Philadelphia 18, Pa., Des Moines 6, Iowa



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WESTON

ALL-METAL THERMOMETER

An accurate temperature record requires more than just instrument accuracy. It requires instrument readability as well. That's why WESTON Thermometers are so widely used for critical applications. A quick glance at their bold, open scales gives you the *exact* reading...no question or doubt about it. Combined with the long-time accuracy and the ruggedness for which they are famous, this feature of readability can be worth dollars to you. Why not send for complete literature today. Weston Electrical Instrument Corporation, 663 Frelinghuysen Ave., Newark 5, New Jersey...Manufacturers of Weston and Tagliabue Instruments.

WESTON *Instruments*

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Just Published!
Illustrates, Explains . . .

Sier-Bath's REVOLUTIONARY NEW GEAR COUPLING

Simplified design (only 7 parts!) No flange, no bolts—assembled in seconds!

Detailed plan drawings and specs. for Standard, Mill Motor, Vertical Shaft, Spacer, Floating Shaft types.

3/5 the size, 1/2 the wt. of conventional types. Makes possible smaller, lighter designs.

How to select the right coupling clearly explained. Service factors for all types of equipment.

ALSO: Installation photos, complete list of cost-cutting advantages. Clear, graphic, concise—shows and tells how this revolutionary new gear coupling can cut *your* power transmission costs.

SEND TODAY FOR YOUR FREE COPY

Sier-Bath GEAR and PUMP CO., Inc.

Founded 1905 **9240 Hudson Blvd., North Bergen, N. J.** Members A.G.M.A.

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CAN YOU AFFORD NOT TO GIVE YOUR WORKERS PROPER *Seating*?

A tired worker costs MUCH more than a GOOD CHAIR

***Royal's* 515 STOOLS WILL HELP KEEP YOUR WORKERS AT PEAK EFFICIENCY...**

Resulting in More Work Produced per Man Hour and Lower Actual Costs per Chair.

- STURDY MASONITE INSERT IMBEDDED IN SEAT PAN.
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10 YEAR *Free* MAINTENANCE POLICY

ROYAL METAL MFG. CO.
175 NORTH MICHIGAN AVENUE
CHICAGO 1, ILLINOIS

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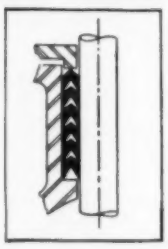
CHEMICAL-PROOF TEFLON PACKING

New V-Ring Design—
Seals at Low Gland Pressure
Reduces Torque on Spindle



Here's a Teflon packing (Chemiseal #810V) that's mechanically more flexible, more resilient than any design to date. Note cross section: each ring acts as a wedge against the next, so that even a light gland pressure forces the ring lips tightly against spindle and stuffing box. (As working pressure increases, sealing force increases correspondingly.) Light gland pressure, plus Teflon's natural slipperiness, means minimum torque on the spindle—an almost frictionless packing that won't "freeze" a valve no matter how long unoperated.

Being made of solid Teflon, Chemiseal #810V packing is *chemically inert*—no corrosion, no contamination. These packings are tough and suitable for −150°F. to 550°F. Ideal for hand-, air-, or motor-operated valves, for emergency shut-off service, for slow-speed reciprocating pumps. Needs no more attention than a packless valve. Makes a permanent installation in steam and water service. Send for Catalog No. 810V.

Teflon Products Division
UNITED STATES GASKET COMPANY
654 N. 10th Street • CAMDEN, NEW JERSEY

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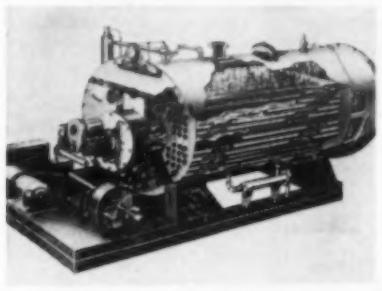
STEAM GENERATOR
600-hp package unit is fired by gas, oil or both types of fuel



Having thermal efficiency in excess of 80 per cent, this 600-hp steam generator is designed to operate at pressures ranging from 15 to 250 psi. Being a packaged unit and factory assembled, it can be placed in operation within 24 hours after it arrives. It is mounted on rigid channel iron base that requires no foundation other than level floor capable of carrying its weight. Installation consists only of connecting unit with water, electric and fuel supply lines; steam header to load; and flue to stack.

Integral induced draft fans have ample capacity for unit to operate at rated load with only a vent to carry off combustion gases. Generator is designed to operate automatically on any grade of fuel oil including bunker C. Burners can be supplied to handle natural gas or for combination gas-oil firing. Unusually large steam space and dry pan assure dry steam at nozzle and ample reserve steaming capacity. Both fire and water sides of boiler are accessible for cleaning.

This generator is the largest in line which ranges in capacity from 20 to 600 boiler hp. It is fully insulated to minimize heat loss and to assure comfortable operating temperature in boiler room. Made by **Superior Combustion Industries, Inc.,** Times Bldg., Times Sq., New York 18, N. Y.

▲ For more details circle **NED-9142** on enclosed inquiry slip ▲

DATA RECORDING CAMERA
is 35-mm motion picture machine for severe operating conditions

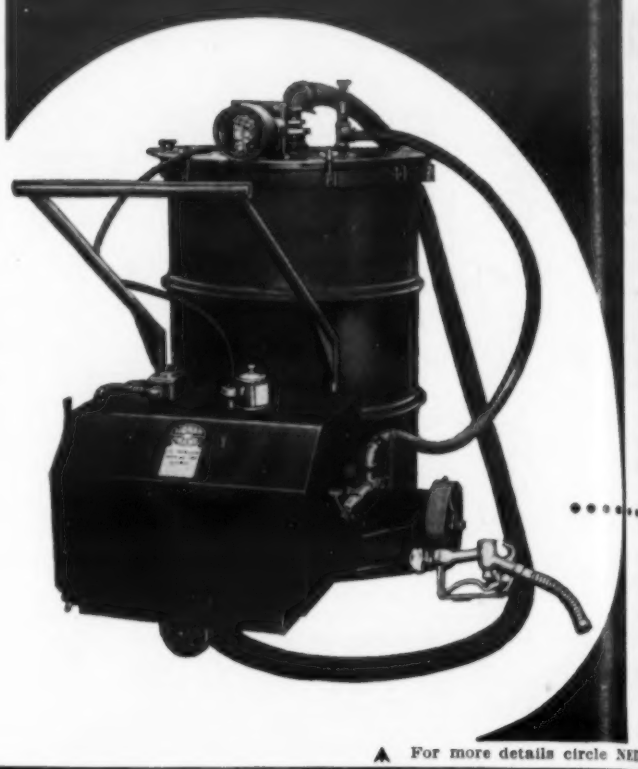
Capable of mounting interchangeable 400 or 1000-ft capacity Mitchell magazines which hold standard 35-mm motion picture film, this data recording camera requires either 28 or 110-v power source. It has been tested throughout temperature range of from −60° F to 160° F at accelerations up to 12g and at altitudes ranging from 0 to 60,000 ft. Features include remote selection of from 4 to 16 frames per second with constant exposure rate regardless of frame speed, provisions for single frame operation triggered either manually or by intervalometer, and integral counting circuits to afford remote means of making frame identification. Lenses are situated in focus calibrated mount and have been selected for sharp definition, high resolution and light transmitting qualities. Precision dovetail mounting slide is provided to insure exact camera indexing during removal and replacement. Made by **Fairchild Camera & Instrument Corp.,** West Coast Div., 53-A W. Union St., Pasadena 1, Calif.

▲ For more details circle **NED-9143** on enclosed inquiry slip ▲

Developed by Pannier in 1928, this "Master Marker" provides easy, convenient stamping of any metal surface. Pannier Supreme Stamp Holder (B) in a V-block housing (A). Stamp holder has replaceable head (C); holds 1/16" to 1/2" interchangeable steel type. "V" angle in block housing guides marker; is varied to suit requirements.

▲ For more details circle **NED-9144** on enclosed inquiry slip ▲

TIME SAVING · MONEY SAVING ONE MAN OPERATION...



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mechanized handling benefits everyone

● In every industry today, the advantages of mechanization are far-reaching. The production of more and better things, at less cost, which is made possible by modern production equipment, benefits employees, management, shareholders or owners, and purchasers of the product. The application of this modern equipment, and the efficiency and economy which it creates, is bringing more good things within the reach of more people.

Well-planned conveyer systems play an important part in these mechanization programs. Today Mathews Engineers are making available to American and Canadian Industry the benefit of long experience with conveying problems. This and the facilities of three modern plants are yours for the asking. Engineering offices or sales agencies are located in principal cities.

MATHEWS C
GENERAL OFFICES *Mathews Conv Compa*
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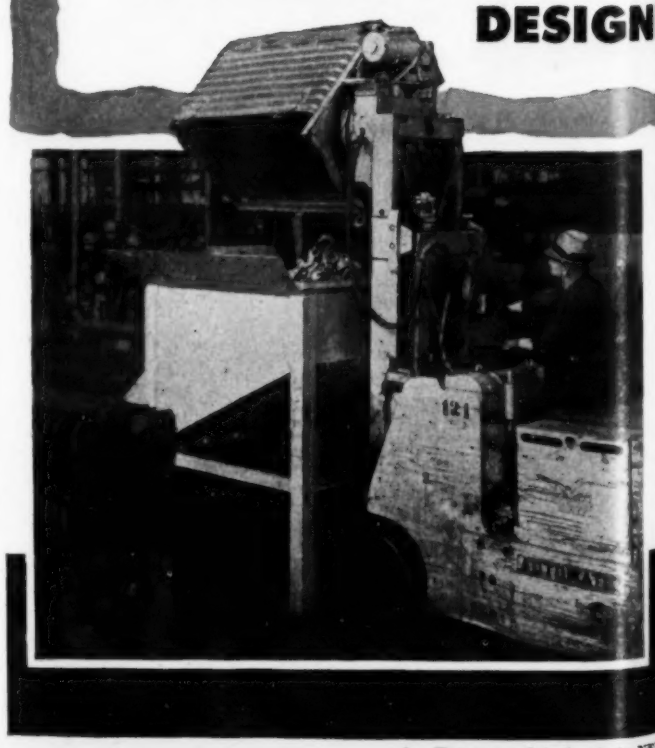
MATERIALS HANDLING EQ DESIGN F



▲ For more details circle NED- on enc

Houdaille*

Oil Dispensing Unit

handy truck is designed primarily to dispense oil from drums machine tool reservoirs or sumps. May also be used to transfer between drums or to remove oils or coolants from tanks for ensing to machine tool sumps.

nit consists of vacuum pump, motor and pivoted drum platform nted on heavy steel wheels equipped with roller bearings. coid liquid level control prevents overflow. Quick-Change, air- t lid is provided for open-end drums. One man can ly operate the unit and do a fast, clean oil handling at considerable saving in time and labor. deal for use either in central reservoir plant outs or where many individual sumps uire servicing.

te for complete information, specifications and operating details of the udaille Oil Dispensing Unit.

*Pronounced Hoo-Dye

oted drum platform makes it easy load or dump oil drums.

nufacturers of the Houdaille Mobile Coolant ter and the Houdaille Sump Cleaner

ONAN-CRANE CORPORATION
Wabash Avenue, Lebanon, Indiana
bsidiary of **HOUDAILLE-HERSHEY CORP.**

on enclosed inquiry slip ▲

W CONVEYERS

Conv Company . . . . . Ellwood City, Pennsylvania
ws Co er Company West Coast . . San Carlos, California
s Co r Company, Ltd. . . . . Port Hope, Ontario

le NED- on enclosed inquiry slip ▲

INGEQUIPMENT GND FOR *less* HANDLING!

WHEN you can take shortcuts in materials handling, resulting in *less* handling, you save time and money.

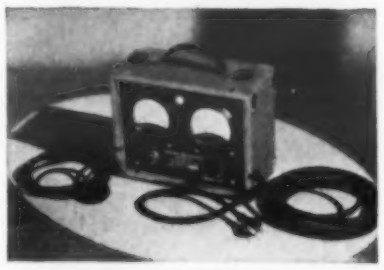
For example, the sturdy Union Metal dump box shown re fights waste motion! Its roll-over feature assures fast, sy, safe dumping. Four-way entry permits the fork truck pick up the load from *any* side—an obvious convenience and time-saver. Finally, the box is also equipped for ane handling, for short operational spotting with a nd pallet truck, and for fast, compact tiering.

This is just one of the many different types of Union etal boxes, skids, pallets and combinations . . . all engineered for efficient materials handling at its best. Write he Union Metal Manufacturing Company, Canton 5, hio, about equipment ideal for *your* needs.

UNION METAL
laterials Handling Equipment

cle NED- on enclosed inquiry slip ▲

THERMOCOUPLE VACUUM GAGES for industrial and laboratory use



Recommended for applications where vacuum must be measured accurately, redesigned line of thermocouple gages includes portable 115-v ac model and types for both rack and panel mounting. All but rack-mounted type operate either from 115-v ac or from No. 2 flashlight batteries. Usable on either glass or metal vacuum systems, gages give continuous indication of pressure and respond instantly to pressure changes. Pressure can be read directly from scale calibrated from 0 to 200 microns. In 1 to 100-micron range, instruments are accurate within 10 per cent of reading or 1 micron, whichever is greater. Gages are connected to gage tube electrically and can be disconnected from tube without disturbing vacuum system. Made by **General Electric Co.**, Meter & Instrument Div., Schenectady 5, N. Y.

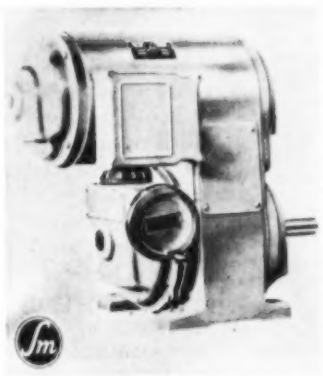
▲ For more details circle **NED-9148** on enclosed inquiry slip ▲

AIR CONTROL VALVE knob-operated type has die-cast body

Two and three-way models of this air control valve are available with shock-resisting high-tensile zinc alloy body. Usable for air, water or oil service, they withstand pressures up to 175 psi and temperatures up to 125° F. Pipe sizes of ¼ and ⅜-in. are offered. Made by **Valvair Corp.**, Dept. N, 454 Morgan Ave., Akron 11, O.

▲ For more details circle **NED-9149** on enclosed inquiry slip ▲

ELECTRIC POWER DRIVES use single-phase capacitor motor



Available in ratings of ½ to 3 hp, single-phase Speed-Trol electric power drives provide infinite speed variation within given range. Ratios of 2:1, 3:1 and 4:1 can be obtained having 18 different maximum speeds from 2000 to 52 rpm. Any selected speed is steady and will not vary under fluctuating load conditions. Starting relay is utilized to obviate necessity of centrifugal switches or rotating devices. Design features fingertip control, one-piece cast iron dripproof frame, herringbone rotor, vinol-acetal insulated wire stator windings and standard NEMA mounting dimensions. Made by **Sterling Electric Motors, Inc.**, Dept. NED, Telegraph Rd. at Atlantic Blvd., Los Angeles 22, Calif.

▲ For more details circle **NED-9150** on enclosed inquiry slip ▲

For Quick, Tight Connections on Field or Factory Air Hose

"AIR KING"

Quick-Acting, Universal Type

HOSE COUPLING

A strong, durable coupling especially useful where quick, convenient change-overs are required. Plain design—no parts to get out of order or clogged with dirt. Made in hose ends and male and female threaded pipe ends. Completely interchangeable. Patented safety locking device is proof against vibration and rough handling. Malleable iron (cadmium plated) or bronze.

Sold by Manufacturers & Jobbers of Mechanical Rubber Goods

DIXON VALVE & COUPLING CO.
HANCOCK ST. and COLUMBIA AVE., PHILADELPHIA 22, PA., U.S.A.
BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON • TORONTO

▲ For more details circle **NED-9151** on enclosed inquiry slip ▲

DISTRIBUTED HEAT or CONCENTRATED HEAT WHICH WOULD YOU PREFER *for melting compounds?*

Here's how all Sta-Warm tanks are wired to distribute not more than 5 watts of heat per square inch of tank sidewall and bottom areas.

Avoid high-wattage concentrated heat in order to avoid burning and spoiling tank contents.

This principle of good design is found in every Sta-Warm compound and soft metal melting tank or pot. It provides the basic reason why Sta-Warm heaters are most economical when every cost factor is considered. It constitutes the one all-important reason why your plant should standardize on Sta-Warm.

In addition, you will find tank capacities, shapes, accessories to meet your requirements in the Sta-Warm catalogs. For unusual applications, Sta-Warm will engineer and build special units to fit your job.

Why not outline your problem today to Sta-Warm engineers? Address *Sales Engineering Dept.*

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST. • RAVENNA, OHIO

▲ For more details circle **NED-9152** on enclosed inquiry slip ▲

1. **TO PREVENT** loss of weight, pliability and quality of hygroscopic materials such as leather, paper, textiles, tobacco and foodstuffs.
2. **TO PREVENT** fires and explosions caused by static electricity.
3. **TO ELIMINATE** unhealthy dry working conditions.

THESE are cold weather dry air problems that cost industry millions of dollars annually. In many plants they can be eliminated with automatic, economical Armstrong Steam Humidifiers. The small C-2 unit illustrated humidifies up to 40,000 cu. ft.*; lists for $120.00 complete, ready for installation. Ask for new 12-PAGE BULLETIN describing operation and installation. ARMSTRONG MACHINE WORKS, 819 Maple Street, Three Rivers, Michigan.

** Assuming 70° F temp., two air changes per hour.*

ARMSTRONG *Steam* HUMIDIFIERS
Easy to Install and Maintain . . . Automatic . . . Economical

▲ For more details circle **NED-9153** on enclosed inquiry slip ▲

VEMCO DRAFTING MACHINES

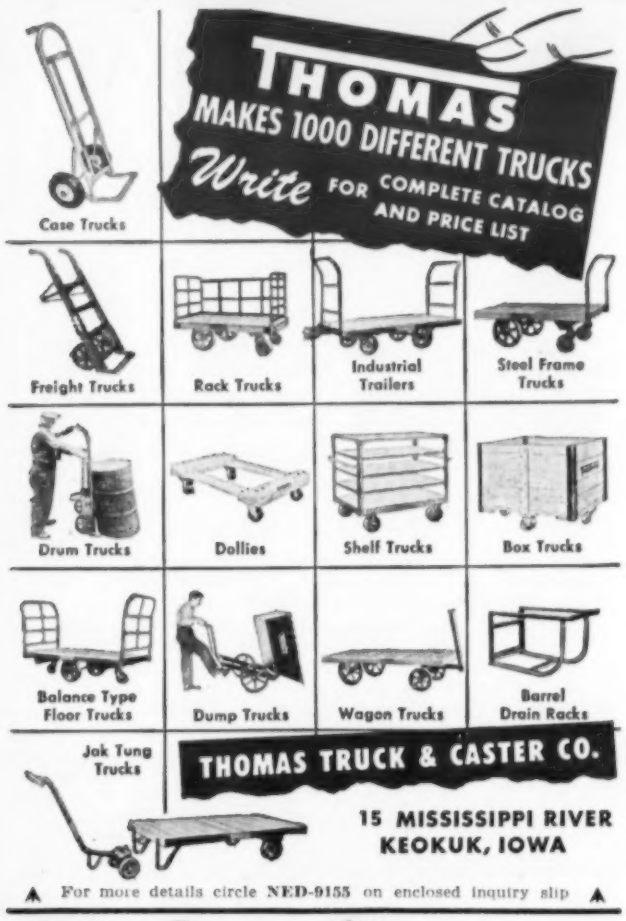
Designed by Engineers for Engineers

1. *Convenient thumb-action indexing for every 15°.*
2. *Simple and positive band tightening device.*
3. *Flexibly articulated arms for easy head movement and flat-lying scales.*

THE engineers responsible for the design of VEMCO Drafting Machines are thoroughly familiar with drafting problems. VEMCO Machines incorporate ALL the facilities desired by the engineer to fill his exacting needs. ★ The VEMCO offers smooth, effortless movement . . . positive setting and control for speed and accuracy. . flexibility for convenient operation. . elimination of an awkward assortment of drafting tools . . . sturdy construction for durability. ★ VEMCO Drafting Machines are finished in blue-green metallic color for eye comfort. ★ Ask your VEMCO dealer for a demonstration or write today for illustrated catalog covering drafting machines and drawing instruments.

V&E MANUFACTURING CO.
PASADENA 2, CALIFORNIA

▲ For more details circle **NED-9154** on enclosed inquiry slip ▲



▲ For more details circle **NED-9155** on enclosed inquiry slip ▲

When Time is Money

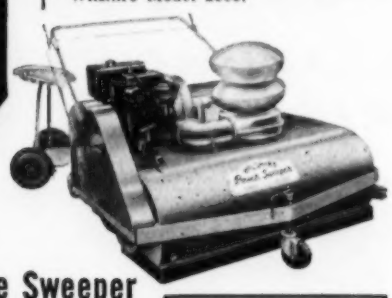
Wilshire POWER SWEEPER PAYS OFF!

FEATURES
- 100% visibility
- High maneuverability
- Fast, efficient operation
- Special Wilshire dust control
- Either 36" or 48" sweep
- Forward and reverse drive

Cuts Sweeping Time 75% or more

Wilshire's new Model 1000, Super Heavy Duty Sweeper, takes sweeping jobs as they come. Sweeping goes on while work is in progress. Special dust control keeps working conditions at their best—and the one compact unit does the work of many men with a minimum of confusion. Sweeps cleaner, closer, faster. For your next big job, use the 35 manpower sweeper — Wilshire Model 1000.

MODEL 800 HEAVY DUTY (Sulky Optional)



Favorite Sweeper of the Industry
- All-steel construction
- Special Wilshire dust control
- Finger-tip dual control
- Either 36" or 48" sweep

FREE DEMONSTRATION ON YOUR JOB — Write for full information and dealer nearest you.

USED BY LEADING FIRMS FROM COAST TO COAST
B & O Railroad • Continental Baking Co • Ford Motor Co • Gimbel's • La-Guardia Field • Railway Express Agency • R. J. Reynolds Tobacco Co • Sears, Roebuck & Co • The Texas Company • U. S. Steel Co • Western Electric Co.

Wilshire POWER SWEEPER CO.
P.O. Box 12725, Griffith Sta.
Los Angeles 39, California

Dealers throughout the U.S. and Canada

Sweeping the Country since 1940!

▲ For more details circle **NED-9156** on enclosed inquiry slip ▲

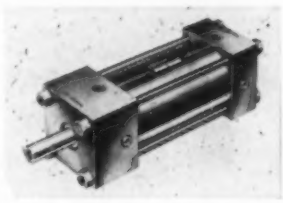
TABLE MODEL DUPLICATOR
prints in as many as five colors

Capable of reproducing from single master sheet anything typewritten, drawn or printed, table model Duplicopy duplicator produces copy at one turn of handle.

Master sheet is inserted in typewriter, message written and sketches included if desired. Sheet is fastened to revolving cylinder of duplicator for subsequent processing. Unit is portable, light in weight and of diecast aluminum construction. It can be obtained with Hammerloid finish in Sahara Topaz or Sapphire Gray. Made by **Duplicopy Co.**, Dept. N2, 224 W. Illinois St., Chicago 10, Ill.

▲ For more details circle **NED-9157** on enclosed inquiry slip ▲

AIR & HYDRAULIC CYLINDERS
for single or multiple installations



Diverse interchangeable mountings machined from solid bar stock permit variety of applications with single Square Circle cylinder. Fixed or adjustable cushions are available for either or both ends of all cylinders in sizes from 2¼ in. and up. Bore sizes presently in production include 1½ to 14-in. diameters. Features include Oilite bearings, solid steel head, noncorrosive brass barrel, combination piston rod wiper and self-adjusting front gland. Large ports offer no inside restrictions and can be related to each other in four 90-degree positions. Made by **Modernair Corp.**, Dept. 72, 4222 Hollis St., Oakland 8, Calif.

▲ For more details circle **NED-9158** on enclosed inquiry slip ▲

ELECTRIC ACTUATED CONTROL
affords rate action and sensitivity

Applicable to regulation of temperature, pH, chemical concentration and gas analysis, P.A.T. '50 electrically-actuated control links Micromax or Speedomax recording instrument and an electric valve drive mechanism.

Significance of rate action is that it responds according to speed with which controlled variable changes. Thus process output is improved by reducing length of time that upset can force controlled process off its set point. If furnace temperature, for example, begins to fall, rate action immediately opens fuel valve. The faster the drop in temperature, wider valve is opened, and as rate of temperature departure decreases, rate action's effect also decreases to bring temperature smoothly back in line. Made by **Leeds & Northrup Co.**, 4934 Stenton Ave., Philadelphia 44, Pa.

▲ For more details circle **NED-9159** on enclosed inquiry slip ▲

NEW! low-cost, easy-to-install flange-mounted ball bearing unit

incorporating Fafnir Wide Inner Ring Ball Bearing with Self-Locking Collar

Simple, low-cost housing idea. Eliminates costly machining, simplifies maintenance. Pair of pressed steel flanges bolts to any part of machine, provides lightweight, compact, sturdy housing for standard Fafnir Wide Inner Ring Ball Bearing. Fafnir Mechani-Seals both sides. Self-alignment during installation. Write for illustrated folder. The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR BALL BEARINGS MOST COMPLETE LINE IN AMERICA

▲ For more details circle **NED-9160** on enclosed inquiry slip ▲

O-B No. 22 Line Gate Valve with non-rising stem. Allows unobstructed flow through port in open position. O-B Flexitite disc* provides positive leaktight shutoff even on gasoline.

O-B gate valves unscrew at the stuffing box to allow easy removal of stem, stuffing box, and packing nut in one piece. With these parts removed, the valve body with disc inside and center piece can be easily threaded to the pipe ends—even in cramped quarters. Available at your Ohio Brass distributor.

OHIO BRASS COMPANY, MANSFIELD, OHIO

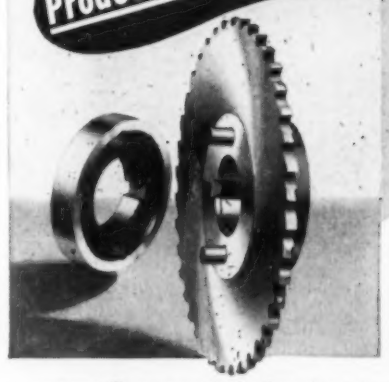
* Reg. U. S. Pat. Office. 4042-V

Ohio Brass VALVES

▲ For more details circle **NED-9161** on enclosed inquiry slip ▲

PRODUCTION - TODAY'S FIRST NEED! but Production with Accuracy!

GET BOTH with Motch & Merryweather Triple-Chip METHOD



SLITTING and SLOTTING SAW BLADES

Every wanted advantage in modern slitting and slotting, PLUS M. & M.'s exclusive dual drive. Only Motch & Merryweather slitting and slotting blades bring you 4 great features: (1) Triple-Chip efficiency; (2) dual drive adaptation; (3) blade interchangeability (fewer blades required); (4) special sizes.

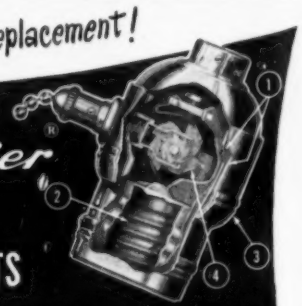
Stock sizes carried by your local dealer.

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING • CLEVELAND 13, OHIO
AT YOUR COMMAND • AN UNPARALLELED EXPERIENCE IN CIRCULAR SAWING

▲ For more details circle **NED-9162** on enclosed inquiry slip ▲

Stop costly socket replacement!

NEW Levolier MODEL 4100 INDUSTRIAL SOCKETS



with the proven mechanism of the Levolier switch

Constructed to outlast any socket you've ever used. The new Levolier 4100 Series Industrial Sockets are built with extras throughout . . . extras that eliminate the trouble spots found in ordinary sockets. Just check these features:

1. DOUBLE WALL THICKNESS
Cap and casing overlaps resulting in double wall thickness support for the lever.

2. HEAVIER SCREW SHELL
Sturdily constructed throughout with bronze screw shell .006 heavier than standard.

3. CAP AND CASING LOCK
Threaded collar locks cap and casing together, cannot pass over shade threads.

4. USES LEVOLIER SWITCH
Time tested Levolier switch mechanism — ultimate in quality for over 30 years.

In addition, the 4100 Series socket has convenient terminals for easy installation, universal lever switching action, extra heavy fibre insulating liner. Underwriters' Laboratories, Inc. Inspected, 660 watt—250 volts—⅛" cap. No. 4103 same with ⅜" cap.

For New Catalog No. 49 write: McGill Manufacturing Co., Inc., 151 N. Campbell St., Valparaiso, Ind.

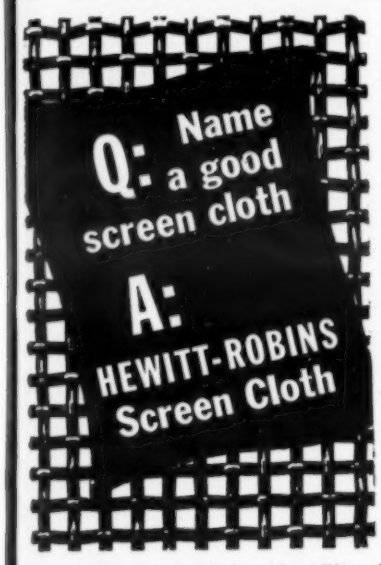
McGILL® electrical specialties

▲ For more details circle **NED-9163** on enclosed inquiry slip ▲

ALL METAL LIQUID SOLDERING FLUX

New liquid aluminum soldering flux makes possible sweating on aluminum, stainless steel, monel, copper, brass, steel or any combinations of same. The newly developed liquid chemical actually breaks the surface oxide on all types of aluminum so that a sweat job is possible in the same manner as ordinary flux on the common metals. Called Liquid ASMC Flux it makes possible the soldering together of such dissimilar metals as stainless steel to aluminum or any combinations of the above metals to aluminum or each other. When used in combination with Farrelloy All Metal Solder the Flux eliminates the electrolytic action between dissimilar metals so that a permanent bond, highly resistant to corrosion is obtained. ASMC Flux makes possible the use of induction heat as well as torch or iron. Production jobs using induction heat are now being accomplished putting two brass studs on Aluminum Name Plates at the rate of 250 per hour. Same flux when used with Farrelloy Solder is equally effective on filling in blow holes in aluminum castings, sweating name plates on cast iron, and many other jobs. ASMC Flux is priced at $3.50 per pound, fob Philadelphia. Farrelloy Solder $2.00 per pound, fob Philadelphia (14 bars to the pound). Write **Farrelloy Company, Dept. NED. 1246** North 26th St., Philadelphia 21, Pa. advt.

▲ For more details circle **NED-9164** on enclosed inquiry slip ▲



BECAUSE you increase the time between screen cloth changes—on *any make* of screen!

BECAUSE Hewitt-Robins Screen Cloth is made of Super-Gyraloy, the specially blended alloy steel wire that's the toughest, hardest screening surface ever developed.

BECAUSE Hewitt-Robins Super-Gyraloy Screen Cloth comes in the *weave* you want . . . the *size opening* you need.

BECAUSE its heat treatment and microstructure make Super-Gyraloy highly resistant to abrasion without sacrificing ductility. You can actually bend a wire of this cloth around its own diameter without fracture.

SEND TODAY for Bulletin No. 113-A. Fully describes Hewitt-Robins Super-Gyraloy Screen Cloth, 3/16" to 6" openings, made from #12 gauge wire to 5/8" rod in square and rectangular openings, flat top and non-blind weaves. Also in Gyraloy (spring steel) stainless steel, Monel metal, brass or enamel coated in any standard diameter of wire. Robins Conveyors Division, 270 Passaic Ave., Passaic, N. J.

HR HEWITT-ROBINS SCREEN CLOTH

▲ For more details circle **NED-9165** on enclosed inquiry slip ▲

READINGS AT A GLANCE

for BOTH AC and DC

Instant Current Measurements Without Breaking Circuit or Insulation . . .

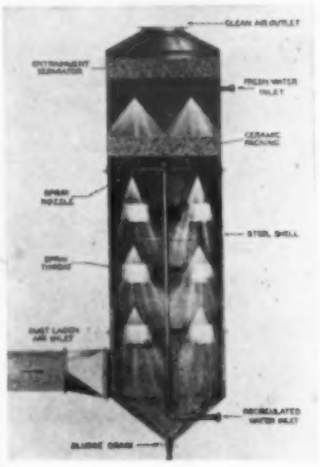
You can read 'em fast and accurately with the Columbia Tong Test Ammeter by merely clamping the tongs around the electrical conductor. Tong Test is the only instrument of its type that can measure both AC and DC. Cannot burn out for it has no windings. Safe, convenient and light in weight. Interchangeable scale ranges up to 1000 amperes. Five types to accommodate cables up to 3⅞", bus bars up to 4½" x ½". Voltage readings, too, with the Voltor Attachment.

Write for Tong Test Bulletin ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave., Cleveland 14, Ohio

▲ For more details circle **NED-9166** on enclosed inquiry slip ▲

DUST COLLECTOR
tower type cleans air thoroughly



Having no moving parts, Pemasco Dust Master Collector is compromise of impingement collector, spray tower and packed tower. It consists essentially of substantial steel shell, spray assembly, series of throat plates and one or more beds of ceramic packing. Incoming dust-laden gases are impinged against wetted lower walls and vanes of chamber, saturated with water vapor and scrubbed turbulently to remove all dust particles. Made by **Prater Pulverizer Co.,** 1510 S. 55th Ct., Chicago 50, Ill.

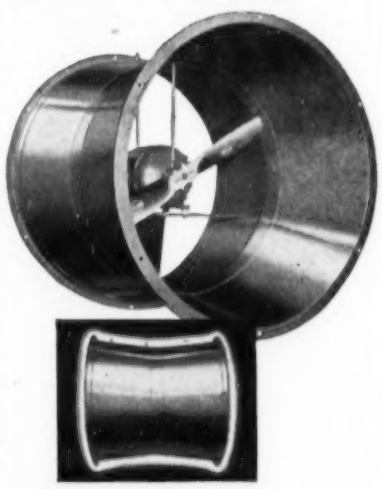
▲ For more details circle **NED-9167** on enclosed inquiry slip ▲

MULTIPLIER PHOTOTUBE
for radiation measurement

Nearly five times as sensitive as original tube introduced a year ago, improved RCA 5819 head-on multiplier phototubes are used in scintillation counters. These basic instruments are utilized for detection and measurement of atomic and nuclear radiation. Spectral response of phototube covers range of 3000 to 6400 angstroms. It is capable of 'counting' radioactive particles arriving less than 0.00000001-in.second apart. Made by **Radio Corp. of America,** RCA Tube Dept., Harrison, N. J.

▲ For more details circle **NED-9168** on enclosed inquiry slip ▲

REVERSIBLE FAN
employs single 30-in. propeller



Specially-designed propeller of this reversible fan assures identical air delivery in either direction of flow. Capacity is approximately 20,000 cfm of free air with 36-in. propeller. Fan is direct-driven by 2-hp motor. Alternate-direction air flow can be accomplished either manually or automatically. Made by **Hartzell Propeller Fan Co.,** Dept. G, 1025 Roosevelt Ave., Piqua, O.

▲ For more details circle **NED-9169** on enclosed inquiry slip ▲

MERRILL LIFTING CLAMPS

THE HEAVIER THE LOAD THE TIGHTER THE GRIP!

Safer and Speedier Lifting at Less Cost...have made MERRILL-Volz LIFTING CLAMPS the choice of large Steel Mills everywhere.

SAFER
- Safety factor of 5 to 1.
- Factory tested at double rated capacity.

GREATER SPEED AT LESS COST
- Entirely Drop Forged and Heat Treated.
- Working parts entirely enclosed.
- Pins do not rotate in frame eliminating wear.

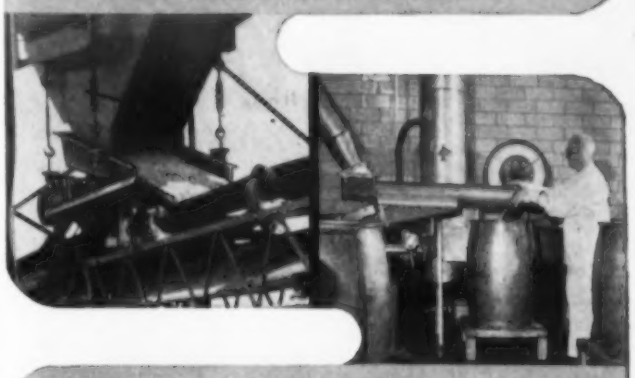
Available in Stainless Steel. Sold by Better Distributors Everywhere.

Producers of DROP FORGED SHACKLES, CLEVIS NUTS, TURNBUCKLES & EYE BOLTS.

MERRILL BROTHERS
56-13 Arnold Ave., Maspeth, N. Y.

▲ For more details circle **NED-9170** on enclosed inquiry slip ▲

SYNTRON
"Vibra-Flow"
VIBRATORY FEEDERS
With Variable Control of the Rate of Flow



WILL HANDLE—most all types of bulk materials—from light, fine dry powders to heavy, coarse lumps—hot or cold—dry or damp. **AT**—variably controlled rates from pounds to hundreds of tons per hour—from 110, 220 or 440 volt, 50 or 60 cycle. **TO**—crushers, grinders, driers, furnaces, packaging machines, belts, mixers, etc.

WRITE TO

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

▲ For more details circle **NED-9171** on enclosed inquiry slip ▲

FOR THOSE HARD-TO-GLUE JOBS..

Paisley SCIENTIFIC ADHESIVE SERVICE

THERE isn't a single adhesive operation in your plant that can't be done quicker, more efficiently, and perhaps at lower cost, with a Paisley *Scientific* Adhesive! Regardless of the *type* of materials to be bonded, the *method* of application, or the setting speed required, Paisley can supply the ONE *best* Adhesive for the job. Get all the facts about Paisley *Scientific* Adhesives. Check the coupon for free Laboratory Reports in which you are interested. Or, send today for our Adhesive Operation Data Sheet.

FREE CONSULTING SERVICE: Buy your Adhesives the scientific way. *Send for an Adhesive Operation Data Sheet. Fill in and return it to our laboratory for analysis and recommendations. Write today. There's NO obligation.*

TEAR OUT..PASTE ON LETTERHEAD AND MAIL TO US TODAY!

Paisley Products, Inc.
1770 Canalport Ave., Chicago 16

Gentlemen: We are interested in Paisley SCIENTIFIC Adhesives. Please send us, at once, without cost or obligation, the Laboratory Reports and Data Sheet indicated below:

LABELING ADHESIVES
- ☐ Shipping Room Glue (For Waybills, PP Labels, Case Sealing)
- ☐ Grip-Tight Label Paste (Tin Cans, Drums, Etc.—Hand Brushing)
- ☐ Resiment Label Cement (Paper to Metal — Table Gummer Type)
- ☐ Coolerproof Bottle Label Glue (For All Automatic Machines)
- ☐ #1908 Bottle Label Glue (Fast Setting—Table Model & Automatic Machines)
- ☐ Can Labeling Adhesives (Burt, Standard Knapp, Kyler, New Way, etc.)

PACKAGING ADHESIVES
- ☐ Boxcal Shipping Case Glue (Corrugated Cases—Hand or Machine)
- ☐ Cartontite Glue (Small Carton—Machine Sealing)
- ☐ Water Resistant Sealing Glues (JAN-P-101 & JAN-P-140 Export Specs.)
- ☐ #4199 Resin Glue (Palmer, Brightwood—Wax Stocks)
- ☐ Waxed Glassine Paper Glues
- ☐ #3740 M.P. Cellophane Glue
- ☐ #3440 Cellulose Acetate Glue

COMBINING & LAMINATING ADHESIVES
- ☐ #1707 Combining Cement (Porous to Non-Porous Surfaces)
- ☐ Plastics Fabricating Cement (Submit samples of parts for Lab Check)
- ☐ Foil to Paper Cements (Describe application & End Use)
- ☐ Felt to Metal Cement (To Steel, Aluminum, Painted Metals, Etc.)
- ☐ Rubber to Metal Cement (Describe Operation)
- ☐ #2145 Resin Wood-Glu (Sets Within 20 Seconds)
- ☐ Lignotite Casein Wood Glue
- ☐ ADHESIVE OPERATION DATA SHEET (You fill in and return for laboratory recommendation.)

COMPANY _____

ADDRESS _____

BUYER'S NAME _____

PAISLEY PRODUCTS INCORPORATED
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products
1770 CANALPORT AVE., CHICAGO 16, ILL. • PHONE CANAL 6-2219
630 W. 51st STREET, NEW YORK 19, N. Y. • PHONE COLUMBUS 5-2860

▲ For more details circle **NED-9172** on enclosed inquiry slip ▲

VARGLAS permafil SLEEVING

Shortly after our first announcement of Varglas Permafil Tubing, engineers began praising its many features — especially its extra flexibility and toughness.

Now, for the first time, Varglas Permafil Sleeving is available in N.E.M.A. grades C-2 and C-1. This new sleeving is lighter coated than the Permafil Tubing but it frequently does the insulating job where tubing was formerly used — and, of course, the cost is much less. Available in coils. Write for free test samples and prices.

VARFLEX CORPORATION
310 Jay St. Rome, N.Y.

For more details circle NED-9173 on enclosed inquiry slip

UNIVERSAL INDUSTRIAL CONVEYOR

Low First Cost . . . .
Low Maintenance

- Removable sides to permit handling large cartons or parts.
- Motor totally enclosed inside conveyor body easily accessible through removable ventilating panel.
- Elevates to desired height with simple hoisting mechanism.
- Driven by means of roller chain to roller bearing equipped gear box.
- Main drive shaft and idler pulley operate on double-sealed ball bearing.
- Standard belt width, 12 inches. Other widths can be furnished to meet your requirements.
- Belt speed, 74 F.P.M.—adjustable if desired.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

For more details circle NED-9174 on enclosed inquiry slip

Your Cost-Cutting Way to SPEED PRODUCTION SHIP MORE GOODS FASTER

. . . is in this 8-Question Check Chart

Business men the world over hail this famous check chart of 8 important questions which shows them the way to speed production, ship *more* goods *faster*, yet cut material handling costs 50% to 75%.

Can you answer questions like these?

"What percentage of your product cost represents material handling?"

"Do you know how much *hand-handling* is costing you in production inefficiency?"

These are a few examples of the check chart questions that bring into the open "hidden-handling" operations that may be adding too much to the cost of your product or service.

Write for *free* Check Chart. Find out how Automatic Electric Trucks move, lift and stack tons of your product with easy finger tip control . . . get rid of costly bottlenecks, speed the flow of goods in your plant . . . yet pay for themselves in as little as months. Send now for check chart.

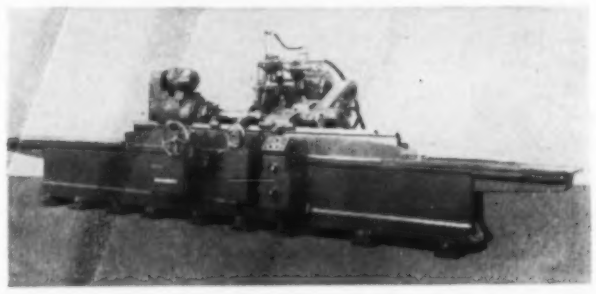
Trade **Automatic** Mark
61 West 87th Street, Dept. X-5,
Chicago 20, Illinois

Trade Automatic Mark ELECTRIC TRUCKS Lighten LIFE'S LOADS

For more details circle NED-9175 on enclosed inquiry slip

PLAIN & ROLL GRINDERS in all sizes from 10 to 24-in. swing for heavy-duty applications

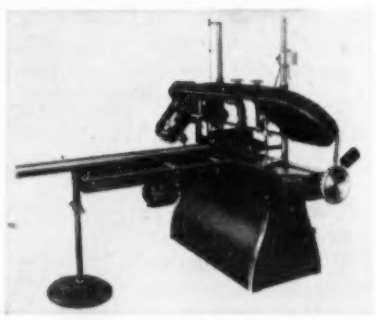
Line of large plain grinding machines and traveling table roll grinding machines has been extended by addition of 16-in. heavy duty and 20 and 24-in. plain grinders as



well as 16, 20 and 24-in. roll grinders. Grinding wheel spindle bearings are Filmatic type which utilize segments that are free to rock slightly in housing bore so as to admit wedge shaped oil films between them and spindle journal diameter as rotation occurs. Direct-current motor controlled electronically from alternating current source drives table through rack and pinion and provides dial selection of infinite number of traverse rates from 3 to 120 in. per minute. Headstock is dead spindle direct-current driven unit having speed range of from 20 to 72 rpm for 16-in. size and 15 to 54 rpm for 20 and 24-in. sizes. Extra equipment that can be obtained for these machines includes automatic wheel balancing and hydraulic profile wheel truing attachments. Made by **Cincinnati Grinders Inc.**, Marburg & Disney Sts., Cincinnati 9, O.

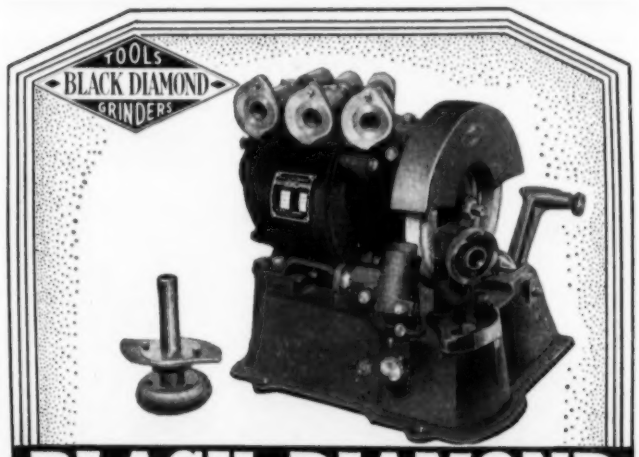
For more details circle NED-9176 on enclosed inquiry slip

METAL CUTTING BAND SAW raises and lowers hydraulically



Suitable for many milling and planing operations such as slotting and removing corners of die blocks as well as heavy duty sawing, model D 14-in. metal cutting band saw has 20-in. clearance under saw blade and 14 x 18-in. capacity. Capable of cutting at rates of 60, 90 and 120 fpm, it can be set to raise automatically at completion of cut and start down again without stopping blade. When equipped with automatic vise tightener, operator merely feeds stock, or for completely automatic operation bar feed will do this and eliminate manual work entirely. Blade measures 14 ft 5 in. long, 1 in. wide and 0.035-in. thick and can be obtained in standard and special types. Cutting head is of one-piece welded construction that includes beams for blade guides and column housing. Coolant system is supplied as standard equipment and can be removed for cleaning. Made by **W. F. Wells & Sons**, North on 131, R 2, Three Rivers, Mich.

For more details circle NED-9177 on enclosed inquiry slip



BLACK DIAMOND
PRECISION DRILL GRINDER

CUT GRINDING COSTS 50%
ON ALL SMALL DRILLS. REDUCE DRILL BREAKAGE AND WORK SPOILAGE WITH PRECISION GROUND SMALL DRILLS.

Anyone can operate a Black Diamond Grinder, can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length, correct angle and clearance for fast, precision drilling.

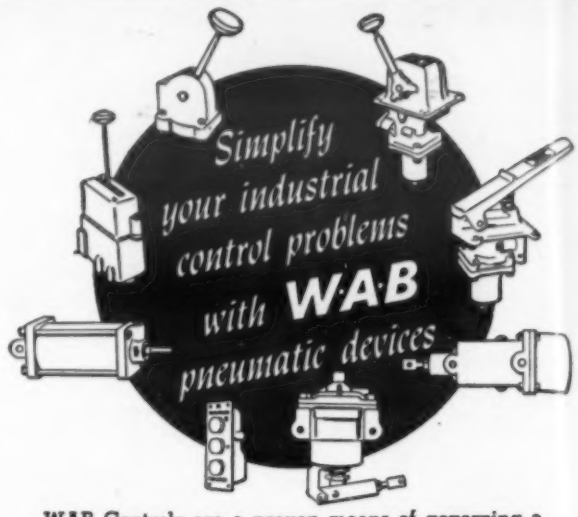
Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are reduced to an absolute minimum.

The built-in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity sharp, ready for use. You should own a Black Diamond. Write for New Bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

For more details circle NED-9178 on enclosed inquiry slip



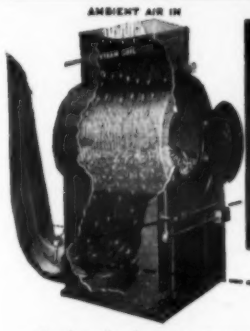
WAB Controls are a proven means of governing a wide variety of functions, from a simple "push-pull" operation to precise positioning. Successfully serving on production machines, hoists, cranes, excavating equipment, oil drilling rigs, boats, etc. Illustrations show only a few of the many devices available. Ask for Bulletin 9481-1 for full details.

Westinghouse Air Brake Co.

Industrial Products Division: Wilmerding, Pa.

DISTRIBUTORS THROUGHOUT THE UNITED STATES
CONSULT YOUR CLASSIFIED DIRECTORY

For more details circle NED-9179 on enclosed inquiry slip



Multi-Purpose Thermostat

Detects Humidity Level Accurately — Instantly

FORCED HOT AIR TUMBLER-TYPE DRYER utilizes Fenwal THERMOSWITCH unit to signal when wash is ready for removal.

A simple, low-cost THERMOSWITCH unit solved problem of variations in wash load, humidity and outside temperature which baffled a cycle timer. Inserted in the moist air outlet duct of forced hot air tumbler-type dryer, it turns on pilot light when temperature of outgoing air, no longer cooled by evaporation in tumbler, rises close to temperature of heated incoming air.

THERMOSWITCH thermostats are unique. Their activating element is the single-metal shell that instantaneously expands or contracts with temperature change, making or breaking the enclosed electrical contacts.

FENWAL INCORPORATED
812 Pleasant Street, Ashland, Mass.
111 S. Burlington Ave., Los Angeles 4, Cal.
TEMPERATURE CONTROL ENGINEERS
Write for Bulletin

Fenwal

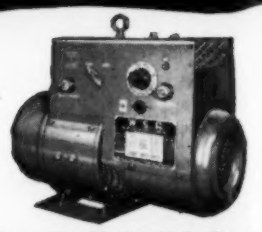
THERMOSWITCH®

The Precision, Multi-Purpose, Thermostat Control

SENSITIVE . . . *but only to heat*

For more details circle NED-9180 on enclosed inquiry slip

Here's the Outstanding DC Arc-Welder Development of All Time



Just Check These Features:

- COMPACT DESIGN — uses little or no floor space.
- GREATER MOBILITY — only 695 lbs.
- LOWEST RPM PER POUND OF WEIGHT.
- DIAL-LECTRIC CONTINUOUS CONTROL.
- REMOTE CONTROL — full arc control at the work.
- QUIET—you hardly know it's running.
- POLARITY SWITCH — an extra feature at no extra cost.
- DUAL-FAN COOLING SYSTEM—the coolest welder you have ever seen.
- HIGH-LOW RANGE — requires only a flip of a switch.
- PUSH-BUTTON START AND STOP SWITCH — overload protection.
- CLASS B GLASS INSULATION — highest quality available.

The New P&H NEMA-Rated Model WFA 300
(Welding Service Range 60-375 amps)

Here's the only DC Welder with time and money-saving Dial-lectric control — a compact, light-weight unit that runs at the life-preserving speed of 1800 rpm.

If you are looking for a DC welder that can reduce your welding costs, your best bet is a P&H WFA machine.

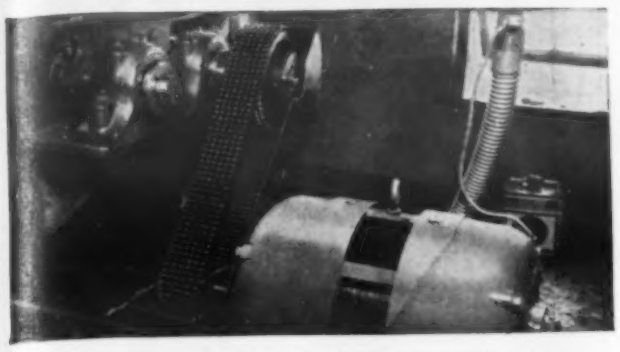
Get all the facts about this new, outstanding DC Welder. Contact your nearest P&H representative or write us for latest literature.

P&H **ARC WELDERS**
4537 W. National Ave.
Milwaukee 14, Wisconsin

HARNISCHFEGER CORPORATION

For more details circle NED-9181 on enclosed inquiry slip

Eliminate Production Delays



Use *Positive* Roller Chains

● Diamond Roller Chains deliver positive, non-slip power at constant speed ratios, assuring maximum output. They are not affected by temperature or atmospheric conditions and are equally effective on long or short centers at high or low speeds. Diamond Roller Chains are made in single and multiple strands for every drive requirement from fractional to several thousand horsepower. DIAMOND CHAIN COMPANY, Inc., Dept. 457, 402 Kentucky Ave., Indianapolis 7, Indiana.

Catalog 709 gives complete data. A copy sent on request.

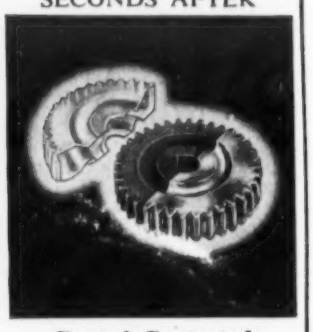
DIAMOND ROLLER CHAINS

▲ For more details circle **NED-9182** on enclosed inquiry slip ▲

HOT MELT PLASTIC COATINGS
for GEARS • TOOLS • PRECISION PARTS

BEFORE SECONDS AFTER

Dip



Coated • Protected

DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
476 Frelinghuysen Avenue, Newark 5, N. J.

▲ For more details circle **NED-9183** on enclosed inquiry slip ▲

SCHRAMM *Pneumatractor*

Pneumatractor with Snow Plow

The SCHRAMM *Pneumatractor* is a self-propelled tractor compressor recommended for operating a wide variety of pneumatic tools and auxiliary equipment for plant maintenance. The Reversible Snow Plow includes a 7-foot blade adjustable for desired angle (up to 30°) right or left.

Write for Bulletin PRP-50

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

▲ For more details circle **NED-9184** on enclosed inquiry slip ▲

REVOLVING STAMP HOLDER
facilitates locating tool at bench

Designed to make individual steel letter and figure stamps readily accessible for use by tool and die maker at his work bench, this revolving stamp holder contains full set of letter and figure stamps. Included also are several extra characters such as period, comma, dash, diagonal line and fractions. Holder carries stamps at angle so that stamp needed extends toward user, and below each stamp on face of holder is large easy-to-read identification character. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

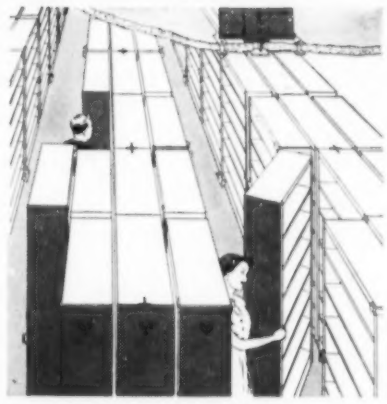
▲ For more details circle **NED-9185** on enclosed inquiry slip ▲

CONTINUOUS-DUTY POWER SUPPLY
for grid, bias and filament use

Designed for standard relay rack mounting or bench use, model No. 131 continuous duty power supply features one regulated high voltage supply, one regulated bias supply and one unregulated filament supply. High voltage supply is continuously variable from 100 to 325 v and delivers from 0 to 150 ma. In 100 to 325-v range, output voltage variation is less than ½ per cent for both line and load variations, and ripple is less than 5 mv. Bias supply is variable from 0 to 150 v and delivers 5 ma with less than 10-mv variation for line fluctuations of 105 to 125 v. Filament output is 6.3-v, 10-amp, center-tapped, unregulated alternating current. Made by **Kepco Laboratories, Inc.**, Room 100, 149-14 41st Ave., Flushing, N. Y.

▲ For more details circle **NED-9186** on enclosed inquiry slip ▲

STORAGE SHELVING
features swinging compartments

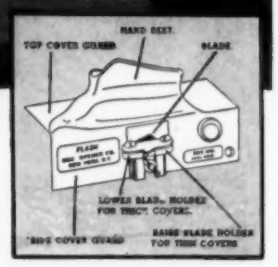


This Compact Storage steel shelving system consists of fixed row of double-faced compartments that have row of swinging double-faced compartments on both sides to provide compact and economical storage of materials. Shelves are fully adjustable on 1-in. centers, and outside compartments can be swung easily into aisle like door to afford access to material on inside. Cases are designed to prevent sway or wobble, and swinging action is controlled rigidly without guides or rails. Recommended applications include storing tools, parts and business records. Made by **Snead & Co.**, Orange, Va.

▲ For more details circle **NED-9187** on enclosed inquiry slip ▲

Amazing FLASH BOX OPENER
Opens Any Carton Quicker . . . Cleaner

Exclusive patented blade holder adjustable to varying thicknesses of carton covers.



THE ONLY CARTON OPENER THAT GIVES YOU ALL THESE ADVANTAGES:

Penetrates exactly under the outer cover thickness • Protects contents of carton • Cuts clearly to permit re-use • Prevents accidents • Saves time • Eliminates fatigue. ***Already accepted by leading industries.***

Retail Price **$1.75**

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

▲ For more details circle **NED-9188** on enclosed inquiry slip ▲

DEBURRING *Made Easy!*

WRITE FOR ABRASIVE BELT GRINDER-POLISHER CATALOG NO. 325

Hammond Machinery Builders INC.
1623 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

▲ For more details circle **NED-9189** on enclosed inquiry slip ▲

LEAKS COST MONEY

Send For FREE SAMPLE

Try Key Graphite Paste at our expense

PROTECT Your Oil or Steam Lines Against Leaky Joints with KEY GRAPHITE PASTE

Thread and gasket connections on oil lines . . . either hot or cold . . . or high pressure steam lines . . . will not leak when sealed with Key Graphite Paste.

This sealing compound expands when it is heated, forming a perfect seal. Assembled joints will not freeze in service. Key preserves threads and gaskets and, above all, it is economical to use because it goes several times further than ordinary pipe dopes.

Ask your jobber for Key Graphite Paste or take advantage of our FREE sample offer.

KEY Company

KEY COMPANY
2601 McCasland Ave., East St. Louis, Ill.

▲ For more details circle **NED-9190** on enclosed inquiry slip ▲

DOLLIES, SKIDS, TRUCKS

Built to meet all tough requirements

THE "HANDY"

● IRONBOUND DOLLIES
The "Handy", one of a full line of dollies, has shaped frame for comfortable hand grip. Equipped with four swivel casters. 3" dia. wheels—choice of steel or rubber.

BARREL SKIDS
Selected hardwood rails reinforced entire length with flat steel bars. Standard models are 16" wide; 8' to 16' long.

Ironbound engineers will help you with your handling problems. We design and build super structures to handle special products at lower handling costs.

● The RolTruk will "pick-up and go" with paper rolls, drums, barrels, etc. Available in several models with capacities ranging from 500 to 2000 lbs. Ask for illustrated bulletin 10RT.

Standard line of Ironbound Skids, Semi-Live Skids, Dollies and Floor Trucks is fully illustrated in Catalog GP-7. Write for a copy, today.

Ironbound

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

SKIDS • SEMI-LIVE SKIDS • DOLLIES • FLOOR TRUCKS

▲ For more details circle **NED-9191** on enclosed inquiry slip ▲

Inexpensive, exacting temperature control combined with continuous indication of the controlled temperature. Control temperature may be changed by turning a thumb screw. Actuates electric heaters, motors or solenoid or motor valves. Catalog No. 1025.

SARCO *Electric* TEMPERATURE CONTROL

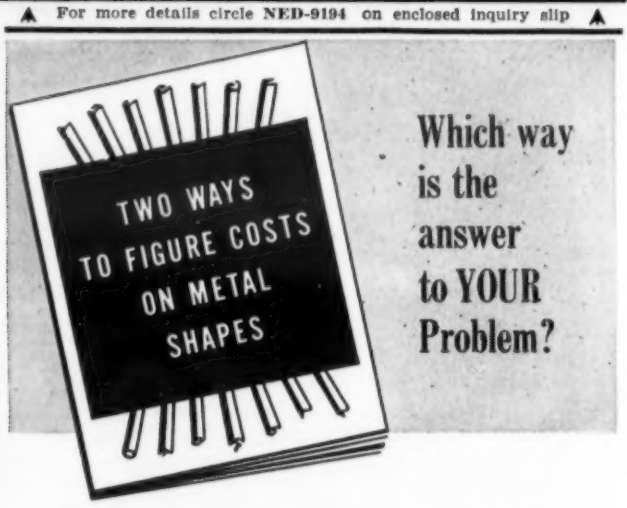
288

SARCO SAVES STEAM

SARCO COMPANY, INC.
Represented in Principal Cities
Empire State Building, New York 1, N. Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

IMPROVES PRODUCT QUALITY AND OUTPUT

For more details circle NED-9194 on enclosed inquiry slip



Which way is the answer to YOUR Problem?

Extrude? Or *roll-form?* From us, you'll get an *unbiased* answer on custom shapes.

We have high-production equipment for *both* extrusion and roll-forming of light metal shapes in various workable metals, in various alloys and finishes. Special contours, holes, slots, etc. Delivered in strips, coils or cut to exact lengths.

Get the lowest possible cost on your structural shapes. Write for Bulletin IB-11.

R. D. WERNER CO., INC.
295 Fifth Ave., New York 16, N. Y.
Manufacturers of Metal Extrusions and Rolled Shapes

For more details circle NED-9195 on enclosed inquiry slip

FREE! FLOOR-CARE BOOKLET

● Send today for this 8-page booklet packed with valuable information on all types of floors. Tells you how they're made — how to clean them — protect them — make them wear longer. Answers 101 questions. Saves you time and money! Every plant and office should have one.

MAIL THIS COUPON NOW FOR YOUR COPY!

MASURY-YOUNG COMPANY
76 ROLAND STREET, Dept. A
BOSTON 29, MASSACHUSETTS

Please send me your FREE FLOOR-CARE BOOKLET

NAME _____
(Please print clearly)
STREET _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-9196 on enclosed inquiry slip

ELECTRIC CONNECTORS kit consists of lugs and set tools

Copper lugs and splicers can be attached to flexible cable quickly and easily with Lug-Set block and punch. Manganese bronze block has three half-circle depressions to accommodate three sizes of lugs and splicers. Cable is stripped, inserted in correct size connector and placed in saddle of block. Barrel of connector is impacted into cable strands with tool steel punch. High-pressure copper-to-copper contact assures maximum conductivity. Made by **Tweco Products Co.**, 1030 E. English St., Wichita 1, Kans.

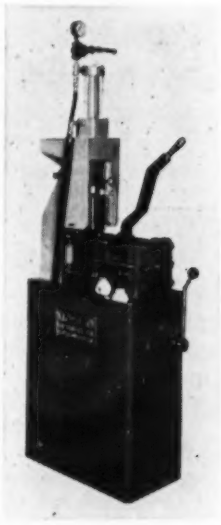
For more details circle NED-9197 on enclosed inquiry slip

STAINLESS CONVEYOR BELT endless type offered in any width

Products requiring corrosion and contamination protection can be conveyed safely on this stainless steel endless belt. Materials handled can be scraped from surface easily, and doctor blades can be used at head pulley to keep belt clean. Finished weld is smooth and flat. Belt is supplied with controlled width and camber, and with surface polished to suit needs. Made by **Orange Roller Bearing Co.**, Metalsmiths Div., 560 White St., Orange, N. J.

For more details circle NED-9198 on enclosed inquiry slip

INJECTION MOLDING MACHINE plasticizing capacity is 5.5 lb/hr



Having plastic injection rate of 0.44 cu. in. of material per second, model HC-75 Minijector injection molding machine is recommended for making such small units as buttons, novelties and dentures, and die tryouts. Machine is completely self-contained, and uses hydraulic system for injection and mechanically-operated toggle clamp to provide maximum clamping pressure. Mold measures 6 x 5 x 5 in., and maximum casting area is 6 sq in. Injection cylinder heater is equipped with 550-w heater assembly, and power consumption of heating unit when plasticizing is 6 amp per hour at 110 v. Unit is powered by 1-hp 1800-rpm single or three-phase electric motor equipped with starter. Where machine is to be used for molding nylon as well as thermoplastics, manufacturer recommends interchangeable cylinder and heater assembly that includes stainless steel cylinder, torpedo, filter and nozzle with nose heater. Made by **Moslo Machinery Co.**, 2447 Prospect Ave., Cleveland 15, O.

For more details circle NED-9199 on enclosed inquiry slip

Used by leaders in every field!

For more details circle NED-9200 on enclosed inquiry slip

ENGINEERED CONVEYORS for MAXIMUM OPERATING EFFICIENCY

MANUFACTURERS of PORTABLE CONVEYORS POWER HELPERS CONVEYOR SYSTEMS

Ask Metzgar to suggest a "Most-for-your-Money" conveyor system to meet your requirements.

Reduced handling costs will strengthen your position in a market that is growing more and more competitive.

WRITE FOR DESCRIPTIVE FOLDER

METZGAR CONVEYORS
METZGAR CO.
416 Douglas St., N. W.
GRAND RAPIDS 4, MICH.

For more details circle NED-9201 on enclosed inquiry slip

for LOWER COST *Materials Handling*

Whether you figure by years of use or by tons handled, BAL tote boxes cost less because they last longer. They're *hard vulcanized fibre*, built to last!

Easy to handle, hard to wear out; and double-strength at ALL reinforcements. Trucks as well as tote boxes made in many sizes for various purposes.

TRUCKS & TOTE BOXES

WILLIAM BAL CORPORATION
11 Johnson Street, Newark 5, N. J.

For more details circle NED-9202 on enclosed inquiry slip

BIN VALVES

A wide variety of Valves to meet most any requirement. Also Feeders, Conveyors, Bin-level Indicators and Rotary Bin Check Valves.

Cast Iron Clam Shell Type

Cast Iron or Steel Bottom Discharge Valves.

Rotary Valve for discharging and controlling finely pulverized material.

Side Discharge Valves.

We will be glad to send along more complete information. Write today.

JEFFREY
THE JEFFREY MANUFACTURING CO.
952 N. Fourth Street Columbus 16, Ohio

For more details circle NED-9203 on enclosed inquiry slip

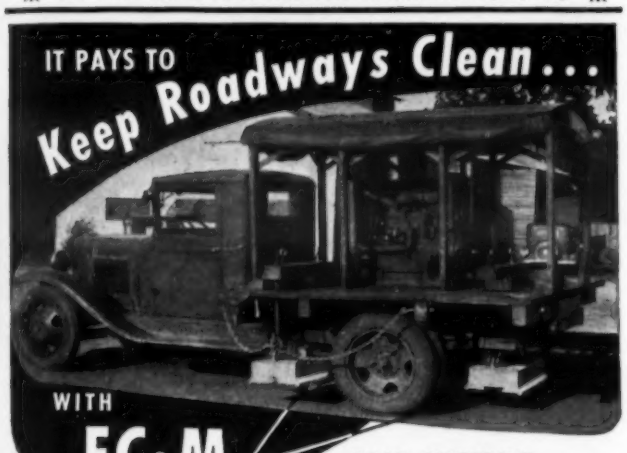
ALL PEERLESS MOTORS ARE "Peerless Registered"

MORE than 90% of all Peerless Motors are custom manufactured to meet the specific operating requirements of the equipment with which they are to be used. So we "Peerless Register" every motor before shipment. The words "Peerless Registered" are a trademark, recorded in the U.S. Patent office. Only Peerless Motors can bear this phrase, and only Peerless Motors offer you this protection. This registration record is assurance to both you and your customer that the Peerless Motor has been properly designed for your equipment so as to give best possible performance and long, satisfactory service. And the registration record makes possible the quick identification of any Peerless Motor—anywhere.

THE PEERLESS ELECTRIC CO., WARREN, OHIO
Manufacturers of Quality Motors Since 1893
Single Phase • Polyphase • Direct Current • ¼ to 15 H.P.

Peerless Electric MOTORS·FANS·BLOWERS

▲ For more details circle **NED-9204** on enclosed inquiry slip ▲



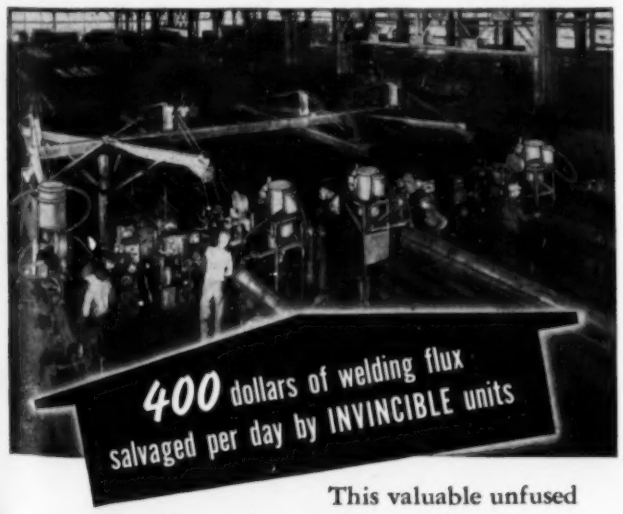
Three EC&M Type M Road-Sweeping Magnets are used on the above truck to provide sweeping an 8-foot path of the roadway. Two magnets—one in front of each rear wheel and the third suspended from the middle-rear—distribute the load on the truck chassis. Note, too, that each magnet is independently adjustable to suit crown or slope of road. A small engine generator set, mounted on the truck, supplies 230 volt direct current for the magnets.

These EC&M Type M Road-Sweepers are used to sweep plant roadways, highways, air fields, parking lots and similar areas over which rubber tired vehicles travel. Get the facts now and be ready for spring cleaning.

Write for Leaflet 920-2M.

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

▲ For more details circle **NED-9205** on enclosed inquiry slip ▲



This valuable unfused flux from submerged arc welding is *automatically* salvaged by five Invincible Flux Recovery Units . . . In steady use for over four years, these Invincibles have required a minimum of repairs.

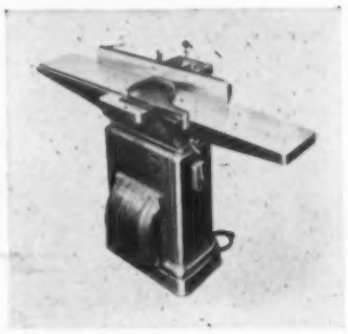
The complete line of Invincible Recovery Units offers the right size and type for every kind of submerged arc welding job.

WRITE FOR *FREE FOLDER* on Flux Recovery

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

▲ For more details circle **NED-9206** on enclosed inquiry slip ▲

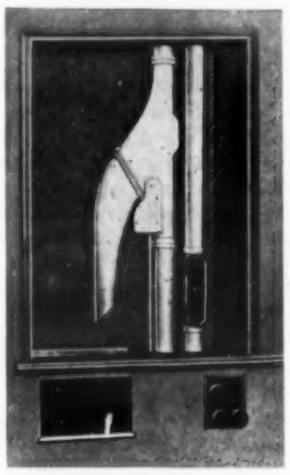
8-IN. JOINTER
has ½-in. rabbeting capacity



Four-knife cutterhead of this 8-in. jointer makes 16,400 cuts per minute for bevel, edge or surface jointing. Overall table size is 60 x 9¾ in., and cast iron fence is 4 in. high and 34 in. long. Finish-grinding of fence working surface and of tables after assembly on base assures accurate alignment. Fence tilts 45 degrees right or left. Cutterhead runs in sealed lubricated-for-life ball bearings at speed of 4100 rpm. Motor mounting plate takes NEMA frame or Delta 8½-in. frame motor. Motor, belt and pulleys are totally enclosed in cast-iron stand. Made by **Rockwell Mfg. Co.**, Delta Power Tool Div., 614 E. Vienna Ave., Milwaukee 1, Wis.

▲ For more details circle **NED-9207** on enclosed inquiry slip ▲

PNEUMATIC TUBE CONVEYOR
selective dial in carrier directs it to any desired station in system



Fully automatic delivery service between all stations is afforded by controlled loop lines in this M & G pneumatic tube conveying system. Each loop line begins at central point and is connected to number of stations. All message or product carriers travel through their sending loops to this central automatic control point where they are automatically directed to their preselected destination by a relay panel.

On each carrier are rings stamped with digits from one to nine. These rings are set manually to number corresponding to that of desired destination station. Carrier is inserted in transmitter of sending station. It travels by suction through tubing to central control point. Relay panel is actuated in accordance with signal set on dial of carrier. Relays select correct outgoing line and set necessary switches so that carrier is delivered to the station originally 'dialed' by sender.

Number of stations which can be employed in system is virtually unlimited and may vary from a few automatic stations with pushbuttons to several automatically operating pneumatic tube centrals with interconnecting facilities for several hundred sending and receiving stations. As many as 1200 carriers per hour can be handled by 40-station system. Various sizes of carriers can be supplied. Systems are designed to meet architectural requirements of virtually any type of building, whether existing or to be constructed. System marketed by **International Standard Trading Corp.**, 67 Broad St., New York 4, N. Y.

▲ For more details circle **NED-9208** on enclosed inquiry slip ▲

COVERS THE DANGER AREA

IPCO WELDING CURTAINS

Workers and passers-by are protected from harmful rays given off by welding operations. Also serve as a protective shield against flying chips and scale. Made of special flameproof and waterproof canvas—or asbestos—complete with eyelets for suspending on rod or pipe support.

SALVAGE COVERS AND FIRE BLANKETS ALSO AVAILABLE

Write for Bulletin L-1250

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

▲ For more details circle **NED-9209** on enclosed inquiry slip ▲

CUT AIR HOSE COSTS
SPEED UP PRODUCTION
PREVENT ACCIDENTS
SAVE TIME

with CHAMPION

AIR HOSE REELS

Even if you disregard the increased production, the savings in time afforded workers . . . Champion Air Hose Reels still more than pay for themselves in reduced air hose replacement costs and in greater safety. They keep air hose off-the-floor, out-of-the-way, yet always convenient—instantly accessible. They're fully described in the free Champion Catalog!

for ceilings walls and floors

Specify CHAMPION **AIR COMPRESSORS**
. . . for 21 Features that CUT COSTS!

Endurance, performance and economy are the qualities you want in an air compressor. When you compare the materials, workmanship and the sound practical design of the Champion Line—you'll agree that the Champion can't be beat! The free Champion Catalog shows you 21 outstanding EXTRA FEATURES found in every Champion Air Compressor—write for your copy TODAY!

The model OE-40-60 Two Stage Compressor shown is one of the 54 Champion Models available from ¼ to 7½ H.P.

CHAMPION PNEUMATIC MACHINERY CO.
837 NORTH PLEASANT STREET
PRINCETON, ILL.

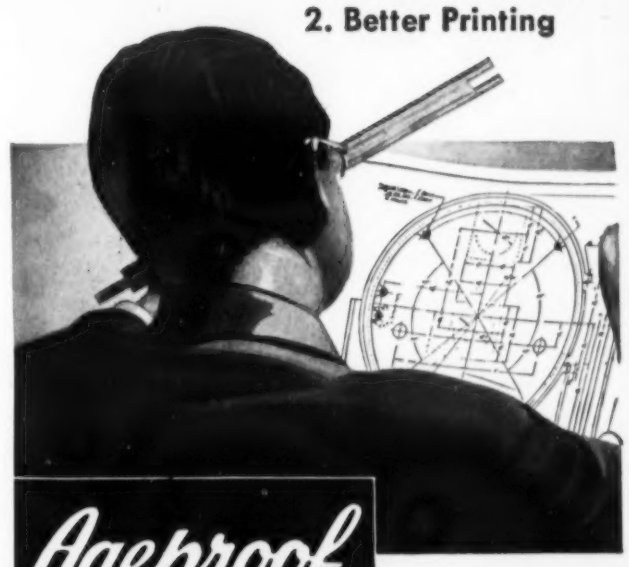
CHAMPION

5124 NED

▲ For more details circle **NED-9210** on enclosed inquiry slip ▲

BETTER 2 VITAL WAYS

1. Better Drawing
2. Better Printing



Ageproof VELLUM

Make this test yourself and KNOW you're right

A simple test will prove to you that AGEPROOF VELLUM combines the perfect drawing surface with perfect reproduction. You can repeatedly erase on AGEPROOF VELLUM without troublesome ghosts in prints, and redraw without feathered lines if you are using ink. You can put AGEPROOF into the files, or into active use for year after year, and your tracings will never turn yellow, become brittle, or lose their super-transparency.

AGEPROOF is a fully plasticized sheet, with the transparentizing agent permeating every fibre. AGEPROOF contains no wax, oil or grease to deteriorate. Test AGEPROOF VELLUM with a hard pencil. Hard pencil drawings on AGEPROOF print sharp and clear, avoid the mess of soft pencil smudging.

EUGENE DIETZGEN CO. • Chicago • New York • San Francisco New Orleans • Los Angeles • Pittsburgh • Washington Philadelphia • Milwaukee. ***Dealers in All Principal Cities.***

FREE SAMPLES

Test AGEPROOF VELLUM! Draw on it with pen and pencil, erase, redraw, make test prints. Write on your company letterhead for samples, sent free.

DIETZGEN
DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

▲ For more details circle **NED-9211** on enclosed inquiry slip ▲

DAV-SON CORK-BACKED BULLETIN BOARDS

DAV-SON indoor and outdoor style Bulletin Boards provide attractive displays for up-to-the-minute announcements and posters. Your choice of hardwood or metal frames, with or without locking glass doors, illuminated or non-illuminated.

"THE SAFETY DIRECTOR"

Flashing display is a constant warning to employees to avoid accidents. Changeable letters permit timely safety messages to be set up as often as required. Definite improvement in safety records has been noted in plants using "The Safety Director."

Write for complete information regarding DAV-SON — Cork Bulletin Boards and Directories and the famous "Safety Director."

DAV-SON

Ask for Bulletin "A"

A. C. DAVENPORT & SON, INC.
ESTABLISHED 1932
311 N. DESPLAINES ST., CHICAGO 6, ILL.

For more details circle **NED-9212** on enclosed inquiry slip

Point of origin for NEW DEVELOPMENTS in tube maintenance equipment

Industrial maintenance, a fast moving field, has a dynamic contributor from this centrally located point. Developing new and better products for the cleaning, expansion and maintenance of pipes and tubes, plus the improvement and refinement of existing products is the AIRETOOL job.

Typical of the latter is the AIRETOOL tube rolling control (a) shown below. Tube rolling can now be accomplished with uncanny accuracy and much greater speed with this automatic tube expansion control. A choice of four motors assures just the right power . . . just the right speed for perfect tube rolling results.

The AIRETOOL cleaner (b) removes scale deposits from straight tubes with speed and safety. It keeps right on operating when the going is tough.

AIRETOOL also offers a variety of brush and drill head cleaners which remove scale from any size tube, either straight or curved. Keep abreast of new developments in tubular care. Write The AIRETOOL Mfg. Co., 308 S. Center St., Springfield, Ohio.

AIRETOOL
MANUFACTURING COMPANY
SPRINGFIELD, OHIO

BRANCH OFFICES: New York, Philadelphia, Chicago, Houston, Tulsa, Baton Rouge

There's an AIRETOOL Tube Cleaner and Tube Expander for every type of tubular construction

For more details circle **NED-9213** on enclosed inquiry slip

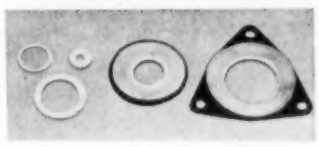
DIAL INDICATOR
lever arm type reads in 0.0001-in.

Precision checking of variations in contour, dimension or roundness is promoted by Geneva dial indicator. Actuated by lever arm, unit features adjustable dial with internal lock for fine settings, 2-in. diameter case ½-in. thick and case fitting plate with ball joint that permits 360-degree turns and free movement to all angles in 180-degree arcs. Case and plunger are machined as one piece from brass casting, and draw-finished hardened and ground plunger is chrome plated.

Indicator can be furnished in set for wide range of dimensional indicating applications. Furnished in compact metal box are indicator, AGD standard points, universal back, attachment for internal testing, tool post holder, upright spindle, universal holding sleeve, threaded shank and clamp for attaching to milling arbors, lathes or planer tools. Made by **Chicago Dial Indicator Co.**, Dept. F, 180 N. Wacker Dr., Chicago 6, Ill.

For more details circle **NED-9214** on enclosed inquiry slip

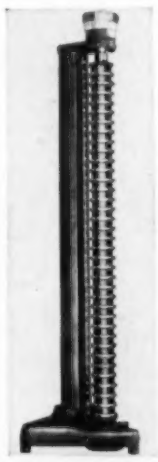
PLASTIC GASKETS
possess high chemical resistance



Fabricated from Teflon plastic, Korda gaskets are unaffected by all strong acids, caustic alkalies and industrial solvents except molten sodium and fluorine at elevated temperatures and pressures. For industrial use, they can be obtained in many different forms including both solid and Teflon-jacketed types. Three gaskets at left in illustration are solid Teflon; in center is Korda-Clad ring gasket; and at right is Korda-Clad gasket for use with Corning Pyrex glass piping. Gaskets can be obtained in all sizes from ½ to 6-in. OD for ASA and special flanges. Made by **Chicago Gasket Co.**, Dept. A-1, 1275 W. North Ave., Chicago 22, Ill.

For more details circle **NED-9215** on enclosed inquiry slip

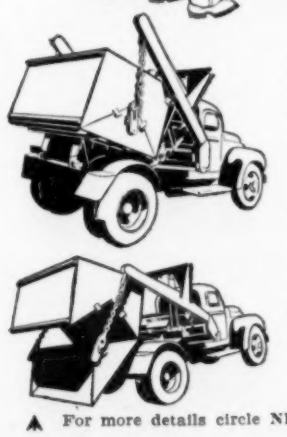
PRECISION GAGE
for surface plate work



Accuracy and speed of operation are features of this 36-in. Pla-Chek precision gage. It is made from hardened steel bar that contains 36 steps placed exactly 1 in. apart. Micrometer screw thread is ground on lower end and large micrometer thimble above is graduated in 0.0001-in. increments. When checking work on surface plate, micrometer is set for the desired dimension in thousandths and tens of thousandths and measurement is taken from desired inch step. Measurements are accurate to 0.002-in. within 36-in. range. Made by **Cadillac Gage Co.**, 20308 Hoover Rd., Detroit 5, Mich.

For more details circle **NED-9216** on enclosed inquiry slip

For Drastic Savings In Materials Handling Costs



Firms everywhere using the Dempster-Dumpster system report tremendous savings in materials handling costs. One plant saves more than $70,000 annually; another saves $50,000, in scrap and trash handling alone. Quick pick-up, hauling and dumping of detachable containers makes one Dempster-Dumpster truck hoisting unit worth 5 to 10 conventional trucks. One man (the driver) and a truck handle any number of standard or special containers, 3 to 10 cu yds. . . built to handle any type of material. Illustrations from top to bottom show typical pick-up, hauling, and dumping operations. Write for catalog 247 today.

DEMPSTER BROTHERS, Inc.
4120 N. KNOX
KNOXVILLE 17, TENNESSEE

For more details circle **NED-9217** on enclosed inquiry slip

MULTIPLE DRILLING with a MULTI-DRILL
INCREASES CAPACITY UP TO 800%

ADJUSTABLE TO ANY HOLE PATTERN FITS ANY DRILL PRESS

If your production requires drilling from 2 to 8 holes in a work piece, a MULTI-DRILL will cut costs and speed output up to 800%. The MULTI-DRILL is universally adjustable to any hole pattern—is compactly built to permit easy, unhampered operation with drill jigs or other special fixtures. Ruggedly built to take the wear and tear of high production work, the MULTI-DRILL will handle your long and short run multiple drilling jobs with ease and economy. The MULTI-DRILL will drill on hole centers as close as ⅛" —handle drill sizes up to ⅜" in steel. Special adaptation available.

There is a Commander MULTI-DRILL Distributor in your area. Write for his name, literature and complete details.

COMMANDER MFG. CO.
4220 WEST KINZIE ST. CHICAGO 24, ILL.

Product of *Commander* — Builder of the *Commander Tapper*

For more details circle **NED-9218** on enclosed inquiry slip

Are You Taking Advantage of NORTON TUMBLING SERVICE?

Many companies are finding that precision tumbling is the most economical method of finishing—and for a wide variety of parts. Norton engineering service is available to help you decide whether the tumbling process and ALUNDUM Tumbling Abrasive can cut your finishing costs. And if you do not have tumbling equipment, Norton can make test runs for you.

Write today—no obligation

NORTON COMPANY • WORCESTER 6, MASS.

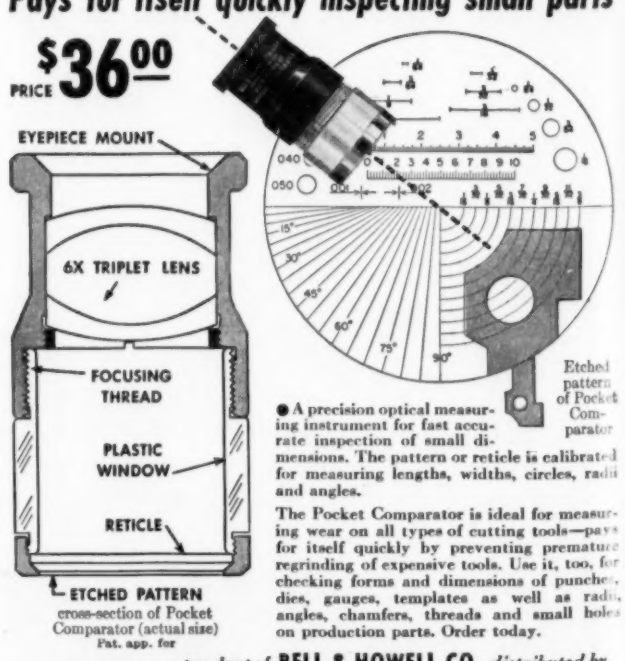
NORTON ABRASIVES

For more details circle **NED-9219** on enclosed inquiry slip

New POCKET COMPARATOR

Pays for itself quickly inspecting small parts

PRICE $36.00



● A precision optical measuring instrument for fast accurate inspection of small dimensions. The pattern or reticle is calibrated for measuring lengths, widths, circles, radii and angles.

The Pocket Comparator is ideal for measuring wear on all types of cutting tools—pays for itself quickly by preventing premature regrinding of expensive tools. Use it, too, for checking forms and dimensions of punches, dies, gauges, templates as well as radii, angles, chamfers, threads and small holes on production parts. Order today.

a product of **BELL & HOWELL CO.** *distributed by*

Write for FREE descriptive folder

See Your National Tool Co. Representative or Local Jobber

NATIONAL TOOL CO.
11210 Madison Avenue Cleveland 2, Ohio

For more details circle **NED-9220** on enclosed inquiry slip

IT'S ALLIED FOR RCA

SPECIAL-PURPOSE TUBES FOR INDUSTRY

All Types in Stock
- Vacuum Power
- Thyratrons
- Vacuum & Gas Rect.
- Ignitrons
- Cold-Cathode
- Phototubes
- Oscillograph Tubes
- Camera Tubes
- Monoscopes
- Special Types

the world's largest distributors of RCA special-purpose tubes

ALLIED maintains *in stock for quick shipment* the world's largest inventory of RCA special-purpose electron tubes—*of all types*. We specialize in supplying the tube needs of industrial, broadcast, governmental and other users. Shipments are made *from stock* to any part of the nation within hours after we receive your order. Fill *all* your tube needs from a *single, dependable source*.

FREE Interchangeability Directory

Valuable guide to selection of proper RCA tube type replacements. Lists 1600 tube types. Write for FREE RCA Guide No. 37-046.

Look to ALLIED for Your Electronic Supplies

Make ALLIED your central supply source for *all* electronic supplies—parts, tubes, test instruments, tools, audio amplifiers, accessories—available *immediately* from the world's largest stocks. Order from your ALLIED Catalog—the leading Electronic Buying Guide. Ask for your FREE copy.

ALLIED RADIO Dept. 37-M-O
833 W. Jackson Blvd., Chicago 7, Illinois

For more details circle NED-9221 on enclosed inquiry slip

New! di-acro BOX FINGER BRAKE

Four models 6" 12" 18" 24"
Capacity—16 Gauge Steel

3 TOOLS IN ONE
1 BOX and PAN BRAKE
2 STANDARD BRAKE
3 BAR FOLDER

One box or 10,000—can be economically produced with the versatile new Di-Acro Box Finger Brake. Serves perfectly for all standard brake operations—an Acute Angle Bar converts the brake to a bar folder for locks, seams, hems and sharp angles. The unique Di-Acro Open End Finger forms square or triangular tubes and other similar parts. The Box Finger Bar can be easily mounted on all standard Di-Acro Brakes.

Send for 40 PAGE CATALOG describing Di-ACRO Shears, Punches, Benders, Brakes, Notchers and Rod Parters—also Power Shears and Benders.

Di-Acro is pronounced "DIE-ACK-RO"

di-acro O'NEIL-IRWIN MFG. CO.
354 EIGHTH AVENUE, LAKE CITY, MINN.

For more details circle NED-9222 on enclosed inquiry slip

Simplify Machines . . . Save Labor with

T-J CYLINDERS

For PUSH...PULL...LIFT Jobs

Consult with T-J about your problems in power movement—pushing, pulling or lifting . . . 100 lb. or 50,000 lb. These are jobs for T-J Air and Hydraulic Cylinders to simplify your machines and equipment, save labor and cut costs! Many standard sizes and styles . . . both cushioned and non-cushioned types . . . precision-built for long life . . . dependable. Write for additional information. The Tomkins-Johnson Co., Jackson, Mich.

T-J Built to "TAKE IT" on Tough Jobs!

Accurately Machined for Mounting as well as for Performance. Shouldered Piston Rods. Self Seating Packings throughout. Hard Chromium Plated Cylinder Bores and Piston Rods. Cylinder Bores Honed Prior to Hard Chromium Plating.

33 Years Experience

TOMKINS-JOHNSON

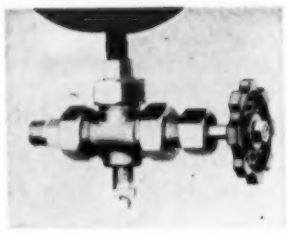
For more details circle NED-9223 on enclosed inquiry slip

BARREL & DRUM COVERS of tough neoprene-impregnated paper

Use of these covers on barrels and drums employed to handle material in process protects contents against rain or unwanted particles. Covers are made from heavy creped kraft paper containing small percentage of neoprene synthetic rubber which increases paper's wet strength and imparts resistance to sunlight, oils and chemicals. Covers have round tops to which are stitched short skirts hemmed with elastic bands around bottom edge. At present covers are available in only one style to fit standard 55-gal drums or barrels. Made by **Chase Bag Co.**, 306 S. Franklin St., Chicago 6, Ill.

For more details circle NED-9224 on enclosed inquiry slip

COMBINATION VALVES have multiple threaded connections



These combination valves combine unions, nipples, reducers, elbows, tees and drain valve into one space-saving unit. They can be obtained in nine styles which include valves with or without union outlet as well as offset and jacketed types. Features include safety shut-off, double-seating stem for repacking under pressure, choice of regular or quick-closing stem, regrindable seats, test gage connection and outside screw and yoke when desired. Made by **Jerguson Gage & Valve Co.**, 80 Fellsway, Somerville 45, Mass.

For more details circle NED-9225 on enclosed inquiry slip

POLYETHYLENE DISPENSER employs critically-sized orifice

Orifice contained in Aquet flexible polyethylene dispenser equalizes pressure and prevents liquid from being forced out of bottle when temperature of liquid is raised or atmospheric pressure drops. Located in side of inner tube, orifice not only equalizes pressure but permits one to incorporate small amounts of air in liquid stream by forcefully squeezing bottle. Since polyethylene resists all chemicals including hydrofluoric acid at room temperature, dispenser can be used for all reagents in laboratory. Dispenser is supplied filled with Aquet surface agent for cleaning laboratory glassware, and space is provided on label for indicating future contents. Made by **Emil Greiner Co.**, Dept. NE, 20-26 N. Moore St., New York 13, N. Y.

For more details circle NED-9226 on enclosed inquiry slip

NEW ELWELL-PARKER Fork Truck

Model F-30T
4000 lbs. Capacity
48" Load

GREATER LIFT—Total lift 130"; initial lift 66".

FASTER LIFT—25 f.p.m. with full load; 42 f.p.m. without load.

AMPLE TILTING ANGLE—5° forward, 12° backward for greater load stability turning corners.

LOW HYDRAULIC PRESSURE—1000 p.s.i.—less chance of leakage.

CUSHION TIRES—Smooth rides, sure traction, no punctures.

EASY TO OPERATE—Automotive controls. Entry or exit from either side. Good vision. Hydraulic brakes.

CLASS B ELECTRIC MOTOR—E-P built—practically indestructible and fireproof.

Send for Illustrated Bulletin

THE ELWELL-PARKER ELECTRIC COMPANY
4097 St. Clair Ave. • Cleveland 3, Ohio

For more details circle NED-9227 on enclosed inquiry slip

BEFORE A — B — AFTER C

A—Deep crack. B—Tamping Smooth-On in. C—Crack completely sealed.

If You've Never Used SMOOTH-ON, read this:

Smooth-On No. 1 Iron Cement is a metallic powder which you mix with water to the consistency of putty. You tamp it, while still soft, into a crack or hole, making sure to force it against all surfaces. With Smooth-On you don't need to use heat or special gadgets. As it hardens, it expands slightly, clinging tightly in place. The repaired part is ready for use as soon as Smooth-On sets hard. Keep Smooth-On handy for both emergency and routine maintenance repairs. Buy it in 7 oz., 1 lb., 5 lb., 20 lb., or 100 lb. size. If your supply house hasn't Smooth-On No. 1, write us.

FREE 40-PAGE REPAIR HANDBOOK

Shows many industrial and home repairs made with No. 1 and other Smooth-On Cements. Leaks stopped, cracks sealed, loose parts made tight. 170 illustrations. Drop us a line for YOUR free copy.

SMOOTH-ON MFG. CO., Dept. 10
570 Communipaw Ave., Jersey City 4, N. J.

SO-293

Do it with SMOOTH-ON
THE IRON CEMENT OF 1000 USES

For more details circle NED-9228 on enclosed inquiry slip

CUT PRODUCTION and MAINTENANCE COSTS

with these inexpensive, ready-to-use Pangborn Blast Cleaning and Dust Collecting units you earn extra profits where custom-built equipment is not practical.

BLAST CLEANING CABINET
cleans metal parts, removes rust, scale, grime, dirt, paint, etc., in a few seconds. Ideal unit for producing clean, smooth surface on pieces up to 60" x 36".

BLAST CLEANING CABINETS $315. and UP

BLAST CLEANING MACHINE
for maintenance and many other uses including the removal of rust, dirt, scale, etc. Economically cleans large objects such as tanks, bridges, structural work preparatory to painting. 6 sizes, stationary or portable.

BLAST CLEANING MACHINES $170. and UP

UNIT DUST COLLECTOR
traps dust at its source, minimizes machine breakdowns, reduces your maintenance costs. Solves many grinding and polishing nuisances and material losses.

UNIT DUST COLLECTORS $286. and UP

HYDRO-FINISH CABINET
uses liquid blast, eliminating dust, and reduces costly hand polishing, cleaning and finishing of molds, dies, tools, etc. Removes scale, discoloration and directional grinding lines, prepares surfaces for finishing. Holds tolerances to .0001".

HYDRO-FINISH CABINETS $1295. and UP

Look to Pangborn for the Latest Developments in Dust Control and Blast Cleaning Equipment

MAIL COUPON TODAY!

PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.
Gentlemen: Please send me further information on—
☐ BLAST CLEANING CABINETS ☐ UNIT DUST COLLECTORS
☐ BLAST CLEANING MACHINES ☐ HYDRO-FINISH CABINETS
I am interested in the possibility of using one of these machines for
.....
NAME.....
COMPANY.....
ADDRESS.....
CITY.....STATE.....

Pangborn

For more details circle NED-9229 on enclosed inquiry slip

New CONGRESS LUBRALIFE PILLOW BLOCKS

Permanently Lubricated Self-Aligning

Throw away that dirty, messy oil can! Congress Pillow Blocks never require oiling, yet there is no oil drip. They are rust free, quiet, trouble free, easily installed.

- **Perfect Alignment**
- **Rugged Construction**
- **Heavy Load Capacity**
- **NO OILING!**

Oil resisting rubber grommets equipped with static dissipator, to prevent transmission of any vibration of the rotating parts, are also available.

The test tube at the right shows the *actual amount* of oil contained in a 5/8" bore Lubralife bearing.

Write for Literature.

CONGRESS DIAMOND BORED **DRIVES**
3750 E. OUTER DRIVE, DETROIT 34, MICH.

▲ For more details circle **NED-9232** on enclosed inquiry slip ▲

ARMSTRONG BROS
Better PIPE TOOLS

An easier, faster, better way to thread 1" to 2" pipe . . .

WITH POWER!

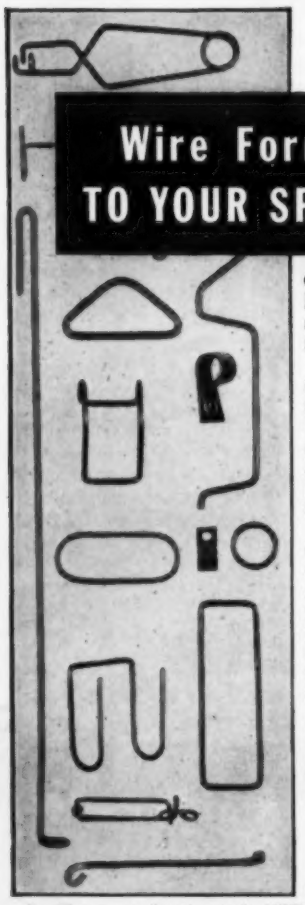
This light (26 lb.) compact Portable Power Pipe Threader, goes to the job—is *operated with a 1/2" portable electric drill.* 1 set of High Speed Steel Chasers do all sizes—just move indicator to 1", 1¼", 1½" or 2" marking. Clamp on pipe and apply drill to drive square. The rest is automatic. Operating on anti-friction bearings with automatic lead, it's a *fast,* easy way to get smooth, accurate threads.

Write for Catalog

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVENUE • CHICAGO 30, ILL.

▲ For more details circle **NED-9233** on enclosed inquiry slip ▲

Wire Forms Finished TO YOUR SPECIFICATIONS



● Now, Sommer is equipped to handle *your* wire forms—in a wide variety of attractive finishes.

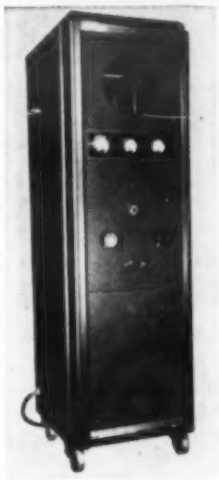
We have installed fast, automatic nickel-plating equipment for either large or small assemblies. Also, if you want cadmium or zinc plating, bonderized enamel, parkerized or copper-coated finishes—you can count on Sommer.

Complete forming, stamping, cut-threading and butt-welding of light metal parts are also among our services. Whatever your problem, you can save time and money if Sommer handles the *complete* job. Just send sample, blueprint or drawing.

SOMMER METALCRAFT CORPORATION
(*Formerly JESCHKE Wire and Specialty Company*)
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▲ For more details circle **NED-9234** on enclosed inquiry slip ▲

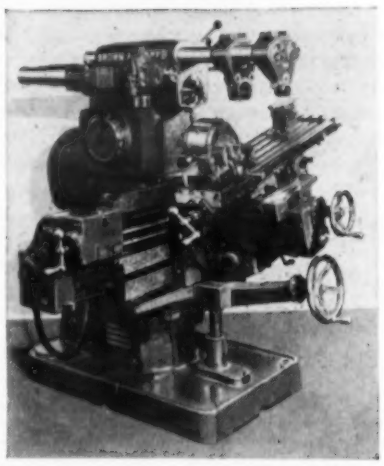
INDUCTION HEATING GENERATOR
wide range of power outputs is available for all R-F heating jobs



Designed for production hardening, annealing, brazing, soldering and vacuum tube bombarding, this induction heating generator can be obtained with inputs ranging from 5 to 40 kw. Generators having power input above 10 kw are three-phase 220-v units while those having 10 kw or less are single-phase 220-v type. Model HB-40 is largest of series, develops power at from 400 to 425 kc per second and is capable of generating in excess of 1100 Btu per minute in ferrous parts. Model HB-20 supplying power at 375 to 400 kc per second has 545-Btu output per minute and is well suited for multistation and conveyor type table operation. Model HB-10 has 268-Btu per minute output and is practical for stationary table operation. Model HB-5 has 131-Btu per minute output and is recommended for all heat-to-metal applications where workpieces are relatively small. All units except model HB-5 are completely watercooled. Made by **Haydu Brothers Laboratory,** R-F Heating Div., Dept. D, Plainfield, N. J.

▲ For more details circle **NED-9235** on enclosed inquiry slip ▲

UNIVERSAL MILLING MACHINE
both simple and compound angular settings are obtained readily



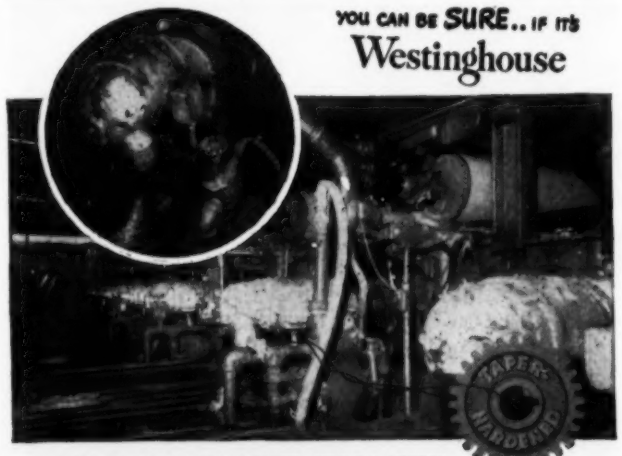
Designed primarily for toolroom and experimental laboratory milling, No. 0 Omniversal milling machine has angular adjustment of table in vertical plane at right-angles to spindle and horizontal feed of entire knee assembly in same plane. In addition, it has gear-driven milling head which is adjustable parallel to overarms and arranged for universal angular location. Work can be milled, drilled, bored or reamed at many different angles without use of fixtures or attachments and without relocating work in holding device.

Wide variety of milling requirements can be met by 18 machine spindle speeds ranging from 40 to 1530 rpm and 76 to 2900-rpm milling head speeds. Infinite number of feed changes range from ½ to 15 in. per minute.

Machine features improved electrical controls, automatic lubrication, heavy machine column with extended spindle face and convenient speed and feed controls. Made by **Brown & Sharpe Mfg. Co.,** Dept. 43, Providence 1, R. I.

▲ For more details circle **NED-9236** on enclosed inquiry slip ▲

YOU CAN BE **SURE**.. IF IT'S **Westinghouse**



HIGH HUMIDITY NEVER STOPS THEM

Bird & Son of East Walpole, Mass., use 14 Westinghouse Gearmotors to power their paper machine drives. They must operate continuously in extremely high humidity. Not a single machine has ever required repair. Here's a 13-year record of Westinghouse Gearmotor performance, that has come to be regarded as normal for these tireless machines.

Bring your speed reduction problems to Westinghouse. Over 60 years' experience with geared drives has taught us a lot of answers.

For complete buying data on Gearmotors, write the Westinghouse Electric Corporation, Dept. 812, P. O. Box 868, Pittsburgh 30, Pa., for bulletin DB-3600-H.

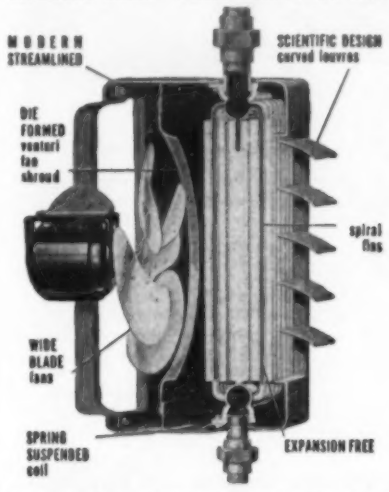
J-07295

Westinghouse GEARED DRIVES

▲ For more details circle **NED-9237** on enclosed inquiry slip ▲

UNIT HEATER . . sets new standard of quietness and heating efficiency

McCord Unit Heaters are a time proven product embodying design based on years of experience in the heat transfer field. These units are not only rugged in design and guaranteed for use on #150 p.s.i. steam pressure but are made attractive in appearance. Two outstanding features appeal to maintenance engineers—we use standard motors with standard bases which quickly permits the use of replacement motors should a motor fail in service—the heating element is made of individual spiral fin tubes which are free to expand independently without putting a strain on the brazed joints. The entire heating unit is spring suspended and floats free in the casing, eliminating rigid connections. Improved type fan blades deliver large volumes of air with minimum air noise and vibration which makes these units suitable for office and store use. A complete line of vertical projection type unit heaters and blast coils are also available. Catalog on request or write for folder. "Instructions for Maintenance of Unit Heaters." **McCord Corporation,** Detroit, Mich. *Advt.*



▲ For more details circle **NED-9238** on enclosed inquiry slip ▲

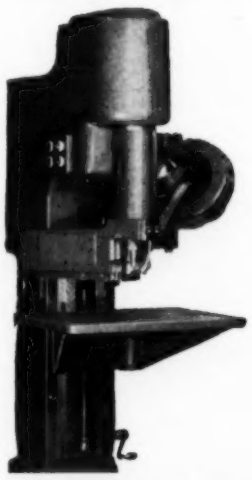
Have You An Assembly Problem?

LET OUR SPECIALISTS HELP YOU

Are you still using slow uphill hand methods that keep your assembly department in low gear and labor costs in high? Discard them and get on to the rapid straight-away of speedy, inexpensive production offered by D.P.S. power-driven machines.

DETROIT POWER SCREWDRIVERS

Drive screws as fast as one a second—all types of screws—no marring of heads or stripping threads—all screws driven to uniform tension—Hopper-fed—SCREWS ALWAYS IN SIGHT OF OPERATOR—3 models, one to fit your requirements.

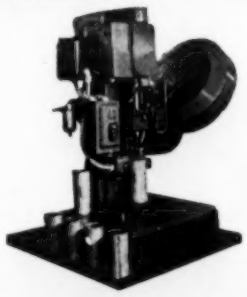


DETROIT POWER NUT DRIVER

A revolutionary new machine that drives nuts with amazing speed, either semi-automatically, or it can be adapted to full automatic operation entirely eliminating the manual handling of nuts. Capacity: nuts, 3/16" min. to 1 1/16" max. across flats.

THE HOPPER UNIT

Motorized—Highly Adaptable—A selective feeding device whereby production parts are selected, oriented and fed in a given position for primary and secondary operations.



SPECIAL ASSEMBLING MACHINES

For light assembly operations using Hopper Units to feed component parts.

Write for Catalog

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICH.

▲ For more details circle **NED-9239** on enclosed inquiry slip ▲

HAVE YOU EVER BOUGHT YOUR WIFE A MINK COAT AT RABBIT PRICES?

SAVE UP TO 85% IN WAR SURPLUS

We've gone NUTS!!

Just Purchased 180,000 lbs. of the FINEST PRECISION Made ELASTIC & FIBER LOCK NUTS!! All are NEW!!

Here's your chance to "STEAL" Aircraft Quality STOP NUTS at less than the cost of common commercial hex nuts. They're ALL NEW Cad plated Steel and a large quantity are even pre-tapped for easier wrenching. ELASTIC or FIBER LOCK SEAL gives a positive, Shake-proof, Vibration & Rust Resistant fastener. No lock washer necessary. One Operation does the job. Just run on the nut. Ideal for use in all types of metal fabrication, assembly, construction etc.,

ALL NEW! AND LOOK AT THESE PRICES for ELASTIC or FIBRE LOCK STOP NUTS

Prices per 100 in these quantities • Special Discount for larger quantities

	100	1000	10,000	25,000	50,000	100,000	500,000
640	$.49	$.25	$.21	$.19	$.17	$.15	$.13
832,836	.59	.31	.28	.25	.23	.21	.19
1032	.59	.31	.28	.25	.23	.21	.19
1/4-28 FL	.63	.39	.36	.33	.30	.27	.25
1/4-28 PT	.63	.39	.36	.33	.30	.27	.25
5/16-24PT	.84	.64	.61	.58	.56	.54	.49
3/8-24PT	.94	.74	.71	.68	.66	.64	.59

Note. FL means Fiber Lock (nature-tapped.) PT means Pre-tapped, ESSNA Brand.

ARO PISTOL 22.50 AIR DRILL or AIR MOTOR with 1/4" Jacobs chuck.

AIR TOOLS 10,000 in various makes, sizes & types. Cleco, Aro, Ingersoll Rand, Chicago Pneumatic, Buckeye E2, 3X, 2X, OY. $55.00 VALUE Pistol or Gooseneck NO.181 PISTOL Only $8.95

NEW BEARINGS These are the Finest, Precision, AIRCRAFT BEARINGS!! We have more than 168 types and sizes in TREMENDOUS QUANTITIES!!! Needle, Roller, Recessed, Rod End, Shielded, Unshielded, Self-aligning, etc. Made by some of the WORLD'S LEADING MANUFACTURERS OF BEARINGS... Yours at a FRACTION of COMMERCIAL PRICES. Write for complete list. Adapt to your use!

PALLEY SPECIALS on HYDRAULIC PUMPS & CYLINDERS

P-1 PESCO PUMP - Positive displacement gear type. Capacity. 1 gal. per minute, at 1500 RPM at 1500 PSI. Operating speed: 3700 RPM intermittent max. 4500 RPM. Rotation: either direction with slight adjustments. $9.49

NEW HYDRAULIC CYLINDER NEW 22.50 Gives 20,000 lb. thrust (push or pull) using 1500 PSI line pressure as obtained from our hyd. pumps. Will produce up to 40,000 lb. thrust with 3,000 PSI. CAN ALSO BE OPERATED ON LOW PRESSURE AIR SYSTEMS. 4" bore, 18" stroke, 30½" length. Ideal for Road-Farm-Shop Machinery.

BENDIX HAND PUMP Provides instantaneous power to operate Hydraulic Systems. Delivers 3000 to 5000 PSI. Has built-in reservoir and Pressure Relief Valve. Can be adapted to 100's of uses in simple hydraulic systems. NEW $15.95 Used - Good Condition 11.95

P-4 VICKERS ANGLE PUMP Positive displacement type, angle piston. Displaces .507 cu. in. per revolution. Has capacity of 6 gal. per min. at 3000 RPM at 1500 PSI. Pressure limit is 1500 PSI continuous, 1875 for 15 sec. Operating speed of 3750 RPM, intermittent maximum 4500 RPM. Rotates to the right only. Motor $14.49

Order from this Ad. All sales final. All Prices F.O.B., Glendale. Pay by M.O. or Check. P.O.'s Accptd. from D.&B. firms. ½ deposit with C.O.D's

PALLEY SUPPLY CO. DEPT. NED-12 6321 SAN FERNANDO RD. GLENDALE 1, CALIF.

NEW 1950 CATALOG 72 pages of Machine Tools (taps, drills, dies reamers, etc.) Hydraulic Cylinders & Valves, Air Tools, Bearings. Write Today for your Copy.

For more details circle NED-9240 on enclosed inquiry slip

Asarcon 773 BEARING BRONZE

...IN ANY LENGTH YOU NEED

- Any length required, up to 105". Longer or shorter than 13"... to suit your requirements.
- Always meets SAE 660 Specifications.
- Minimum of wasted short ends.
- No sand or dross to dull tools.
- No soft or hard spots.
- No blowholes or porosity.
- Better fatigue characteristics.
- Greater impact strength, tensile strength, yield strength and hardness.
- National distribution.

Order ASARCON 773 bar bronze in any length you need . . . up to 105".

AMERICAN SMELTING AND REFINING COMPANY
Perth Amboy Plant, Barber, New Jersey

For more details circle NED-9241 on enclosed inquiry slip

DO YOU KNOW?

—that a PILOT LIGHT CAN IMPROVE YOUR PRODUCT . . . add attraction—safety—service?

Ask DIALCO
—what lamp to use
—how to use it
—what it will do
—what it will cost

THIS MAY BE THE ONE
Designed for low cost NE-51 Neon
• Built-in Resistor • Patented
• U/L Listed • Rugged
Catalogue Number 521308 — 997 for 110 or 220 volts.

SAMPLES for design purpose NO CHARGE

NEW! Write for the "HANDBOOK OF PILOT LIGHTS."

Write us on your design problems.

Foremost Manufacturer of Pilot Lights
The DIAL LIGHT COMPANY of AMERICA
900 BROADWAY, NEW YORK 3, N. Y.

For more details circle NED-9242 on enclosed inquiry slip

SLIP CLUTCH
for constant tension or torque

Designed to maintain constant tension or constant torque on winding operations, this slip clutch is recommended for use in printing, paper making, plastics, wire and textile industries. Clutches can be obtained in from 2⅜ to 27-in. diameter sizes with torque ratings up to 10,000 lb-ft and heat capacities up to 8½ hp. Features include ventilated plates, cooling fins and pressure springs with long deflection range for accurate adjustment. When function is constant tension, regular adjusting nut is replaced with sliding collar to permit adjustment while unit is in operation. Made by **Hilliard Corp.**, 40 W. Fourth St., Elmira, N. Y.

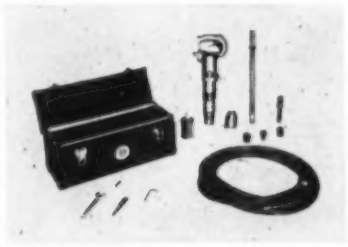
For more details circle NED-9243 on enclosed inquiry slip

BOXED COUNTERSINK SET
contains 1/4, 3/8, 1/2 and 3/4-in. sizes

Grouped together in flat wooden case designed to fit when closed into standard tool-box drawers, four countersinks comprising Chatterless countersink set No. 27 can be obtained in 30, 41, 45 or 60-degree C/L angles. Of high-speed steel, they cut fast and clean on wide range of materials with either light or heavy cuts. Ample body length is provided so that each tool can be reground many times. Made by **Severance Tool Industries Inc.**, 761 Iowa St., Saginaw, Mich.

For more details circle NED-9244 on enclosed inquiry slip

AIR-POWERED UTILITY DRILL
is supplied in handy carrying case



Designed as lightweight utility tool for plant maintenance crews, model S17 multipurpose drill is furnished with complete kit of drill accessories which include 14-in. drill steel and three assorted-size rock bits, star drill adapter and 25 ft of air hose. Of self-rotating pneumatic hammer type, it is recommended for placing anchor bolts, running conduit, laying cable and locating pipe. It will drill either concrete, brick or stone with standard steel drill, and stop-rotation feature converts tool to lightweight chipping hammer or pick. Made by **Gardner-Denver Co.**, 1350 Front St., Quincy, Ill.

For more details circle NED-9245 on enclosed inquiry slip

• Fluid Power Improves Production

"LOGAN" AIR-DRAULIC® FEED-CONTROLLED CYLINDERS

• Power Movements in Any Direction
• No Power Unit Required

Combines the fast-acting, economical, low pressure operation of AIR with the smooth, uniform controlled regulation of OIL

Logan Air-Draulic Cylinders provide far more accurate, uniform action than any ordinary air cylinder. They can be furnished for controlled feed with rapid return in either direction, or in both directions. Skip feed movements can also be provided by means of a cam valve in hydraulic circuit.

5 STANDARD MOUNTING TYPES
Foot • Center Line • Blind End Flange • Round End Flange • Clevis

Standard bores from 3" to 8". Any stroke to 5'. For air pressures to 150 p.s.i.

*ENGINEERING SERVICE: Consult our engineers regarding type of cylinders best suited to your needs. No obligation.

FREE CATALOGS Write for your free copy of catalog No. 471. Contains full engineering data and diagrams.

Logan SAVES TIME EFFORT MOTION
Air and Hydraulic Equipment
LOGANSPORT MACHINE CO., INC. 806 Center Ave. Logansport, Ind.

FLUID POWER SPECIALISTS SINCE 1916

For more details circle NED-9246 on enclosed inquiry slip

Take a Tip: Take TESTMASTER

Testmaster is no bigger than your thumb, yet it packs all the sensitivity and repeat-accuracy of a full-sized Dial Indicator. It has real adaptability. You can squeeze it into tight places. You can reverse the direction of the point travel. You can "see" into holes and around corners.

Write for more information on Testmaster, today. Federal Products Corp., 1712 Eddy St., Providence 1, R. I.

EIGHT MODELS TO CHOOSE FROM

Regular	Perpendicular	Graduated	Range	Price with case and holding device
Model 1	Model 5	.001"	.030"	$20.50
Model 2	Model 6	.0001"	.008"	$25.00
Model 3	Model 7	.0025mm	.2mm	$25.00
Model 4	Model 8	.01mm	.8mm	$20.50

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively.

For more details circle NED-9247 on enclosed inquiry slip

Hanna® 1/4" Unitite Jr. CONTROL VALVES

Ideal for tubing and light piping installations

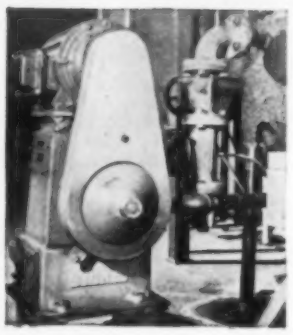
THESE UNITITE JUNIORS have the same functional design as the well-known Hanna Unitite Valves. Designed as 4-way valves, they can be used as 3-way valves by plugging one port. Unitite Junior Control Valves are suitable for air, oil or water pressures up to 500 p.s.i. The handle movement is 80° for a complete reversal. Precision built, packless and permanently tight, these Unitite Juniors are ideal for operating small pneumatic or hydraulic cylinders, or as pilot controls for larger valves.

Write today for Catalog 254 . . . new catalog of Hanna's complete valve line.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS
1765 Elston Avenue, Chicago 22, Illinois

For more details circle NED-9248 on enclosed inquiry slip

HIGH VACUUM PUMPS for PROFITABLE OPERATION



HIGH vacuum processing necessitates vacuum pumping equipment to provide the low pressures required for efficient and profitable operation.

Stokes high vacuum "MICROVAC" Pumps provide the necessary low pressures . . . they combine simplicity of design, high volumetric efficiency, low power consumption, and lowest operating costs. Easily installed with low upkeep and maintenance.

This catalog should be in your files . . . it has a wealth of valuable high vacuum data. Sent on request.

F. J. STOKES MACHINE CO.
5964 TABOR ROAD
PHILADELPHIA 20, PA.

FJS

F. J. STOKES MACHINE COMPANY

▲ For more details circle **NED-9249** on enclosed inquiry slip ▲

CONSTRUCTION MEN REPORT:

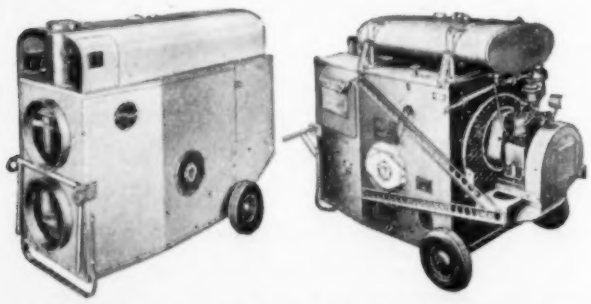
BELIEVE ME, ALL PORTABLE HEATERS ARE NOT ALIKE

Only "fresh air" portable heaters are absolutely safe. That's why I like Herman Nelson. Its *sealed-flame* principle positively prevents carbon monoxide poisoning.

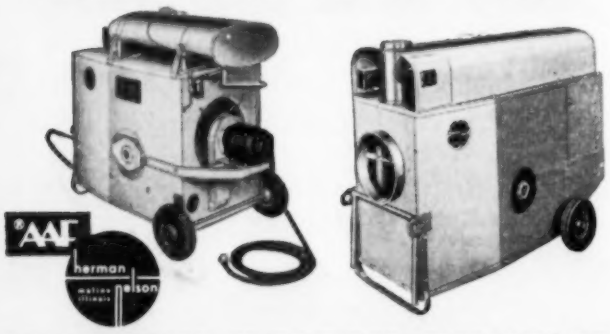
I'VE SOLVED THE PROBLEM OF WINTER SLOW-DOWNS

Nelson heaters keep my jobs going right through winter's coldest months. I use them for drying, thawing, ventilating and space heating. It's the most versatile portable heater on the market. Pays for itself on the first job!

You'll say Nelson Portable Heaters are the best buy, too. Just see what a *deal* your nearest Nelson dealer can offer you *now*, while stocks are still on hand. Write to Dept. ND-12.



HERMAN NELSON PORTABLE HEATERS



AAF herman nelson

HERMAN NELSON DIVISION
AMERICAN AIR FILTER COMPANY, INC.
Moline, Illinois

▲ For more details circle **NED-9250** on enclosed inquiry slip ▲

FORGED STEEL TRAP for high-pressure steam service

Suitable for superheated steam service, this Super-Silvertop forged steel trap can be used at pressures up to 500 psi and temperatures up to 800° F. Supplied with ½ or ¾-in. pipe connections, trap can be obtained in two types: No. 340 for straight-line installation or No. 60 designed with inlet in bottom and outlet connection in top for vertical installation. Both types feature guided bucket for positive valve closing and have stainless steel internal parts. Made by **V. D. Anderson Co.**, 1932 W. 96th St., Cleveland 2, O.

▲ For more details circle **NED-9251** on enclosed inquiry slip ▲

ABRASIVE STONES color code aids selection

Color identification for instant selection of proper abrasive stone is feature of Dymo line of abrasive stones that can be obtained in silicon carbide and aluminum oxide types. Sizes range from ⅛ x 4 in. to 1 x 6 in. in from 220 to 600 grit and from extra soft to medium hard. Rectangular, square, triangular, half-round and round shapes can be obtained. Each stone is permanently color-tipped in brilliant range from black to yellow according to its grit size. Made by **Elgin National Watch Co.**, Industrial Products Div., 932 Benton St., Elgin, Ill.

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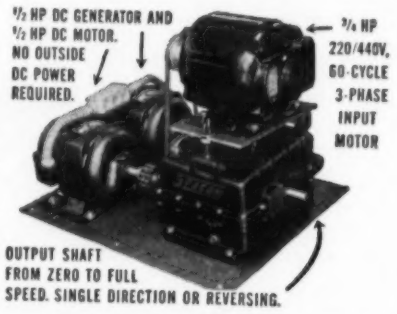
VARIABLE-SPEED DRIVE offered in 1/2 and 1/3-hp models

Consisting of standard alternating current squirrel-cage motor, two standard direct current motors and differential gear box, Specon No. OOED variable speed drive is available in ½-hp nonreversing and ⅓-hp reversing models. Maximum output speed of nonreversing models for direct coupling is offered in range of 250 to 1000 rpm. Minimum output speed in all cases is zero. Maximum torque is obtained at near zero speed, with gradual torque decrease as speed increases. Reversing model can be supplied with output speeds of 150 to 600 rpm in either direction of rotation. Speed changes are made smoothly, and simple standard controls are used. Made by **Speed Control Corp.**, Dept. C-8, 1450 E. 289th St., Wickliffe, O.



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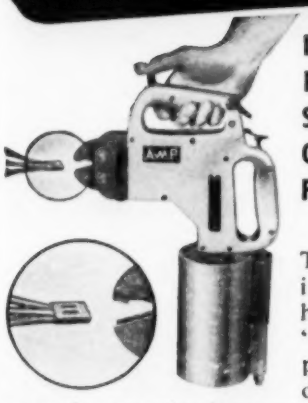
"stub" position crimps are possible with AMP'S NEW PNEUMATIC TOOL



INTERCHANGEABLE HEADS FOR CRIMPING SOLDERLESS TERMINALS ON WIRE SIZES FROM #6 TO #1/0.

This sturdy AMP tool features interchangeable crimping heads for either conventional "side position" or novel "end" position crimping, as well as a double set of handles and triggers. A suspension loop enables tool to be supported from above. Air cylinder is constructed of seamless tool steel—safety factor 300%. Toggle action jaws insure complete crimping cycle. Operates from standard shop outlets of 85 p.s.i.

AMP

AIRCRAFT-MARINE PRODUCTS INC.
1317 N. 4th Street, Harrisburg, Pa.

CANADIAN REPRESENTATIVE: R. M. Hutcheson, 10 Nordale Crescent, Hardington, P. O., Toronto 15, Ont., Canada

U. S. Patents Pending AMP Trade Mark Reg. U. S. Pat. Off. Elgin 5647

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CHATTER-FREE HIGH-PRECISION MILLING AT LOW COST!

BENCHMASTER LOW COST MILLING MACHINE does the work faster, easier, accurately, and economically!

MILLS HORIZONTALLY and VERTICALLY. Also DRILLS, GRINDS, TURNS!

Write for FREE literature. Dept. NED

benchmaster PUNCH PRESSES AND MILLERS
2952 West Pico Boulevard, Los Angeles 6, California

▲ For more details circle **NED-9255** on enclosed inquiry slip ▲

The Essentials of Sound Weighing . . .

There are three essentials for good weighing. They are (1) Accuracy . . . which eliminates waste from overweight also protects you against underweight. (2) Scales to fit the operation . . . the save time and labor cost factor (3) Speed of Operation . . . weighing equipment geared to keep pace with allied equipment used. These are the essentials that control costs and in turn these are the factors we consider when EXACT WEIGHT Scales are built. The fact that thousands of these famous scales are in use in every major industry in America proves we believe that these weighing units produce better goods easier, faster, cheaper and more profitably for the user. Write for details for your business.

EXACT WEIGHT SCALES
Industrial Precision

THE EXACT WEIGHT SCALE COMPANY
930 W. Fifth Avenue, Columbus 8, Ohio
2920 Bloor St., W., Toronto 18, Canada

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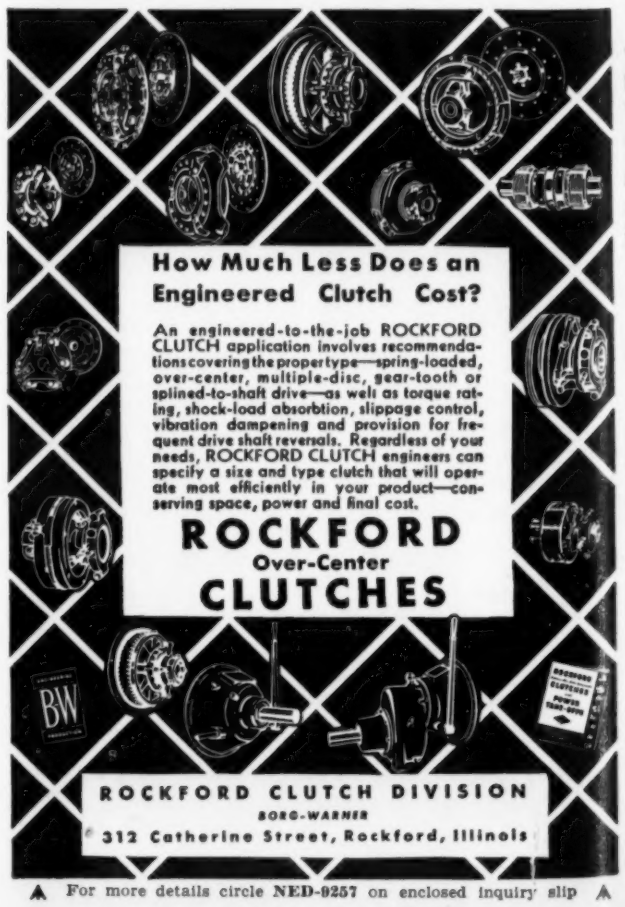

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SPRACO NOZZLES

Write for NOZZLE CATALOG to
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-9258 on enclosed inquiry slip

NEW

There's always something new in RAPISTAN

ALUMINUM POWER BELT CONVEYOR

Light weight, reversible power belt conveyor, for loading, unloading or stacking all types of packaged or bagged materials! It's the new, aluminum Stevedore, Jr.: roll it from job to job, place it easily in position! Capacity to 750 lbs. Non-corrosive. Lengths from 11′ to 21′. Belt widths, 10″ and 16″. ⅓ or ¾ HP motor.

Write for prices and descriptive literature!

The RAPIDS-STANDARD COMPANY, Inc.
204 Rapistan Building
Grand Rapids, Michigan
Representatives in Principal Cities

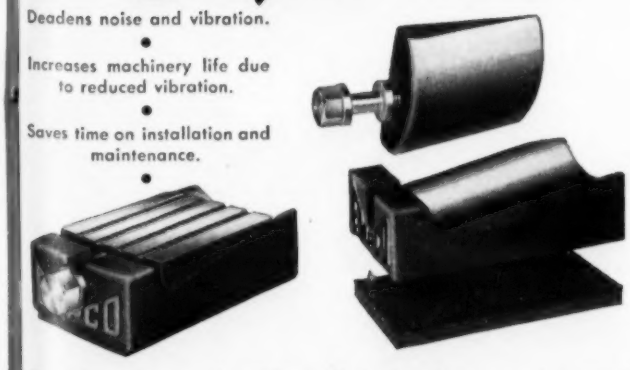
Rapistan® MATERIAL flow EQUIPMENT

CONVEYORS: Power or Gravity, Portable and Stationary.
Also CASTERS • HAND & PLATFORM TRUCKS.

For more details circle NED-9259 on enclosed inquiry slip

NEW VIBRATION ABSORBING MACHINE LEVELING Empco JACK

Deadens noise and vibration.
•
Increases machinery life due to reduced vibration.
•
Saves time on installation and maintenance.
•



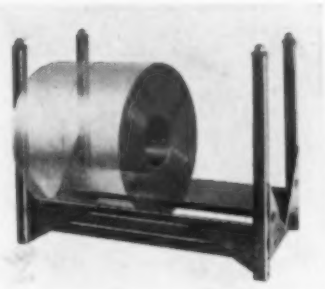
Tests have proven that "Controlled vibration means increased productivity and decreased maintenance costs." That is why the new Empco Jacks, featuring VI-SORB, the vibration absorbing mounting pads, save many times their initial cost. With the combined features of Empco's self-aligning, two-way control Jacks and VI-SORB pads, set-up and maintenance costs are greatly reduced. For complete data and prices on the new Empco Jack with VI-SORB pads, write or wire today. Immediate delivery.

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

For more details circle NED-9260 on enclosed inquiry slip

HEAVY-DUTY COIL RACK offered in capacities to 10,000 lb



Usable for stacking purposes, these heavy-duty coil racks are of welded tubular steel construction with two heavy square tubes welded together for extra load capacity. Nesting caps in corner posts allow safe and convenient storage in multiple tiers. Entire weight of upper tiers is carried by corner posts in lower tiers, with no stress on materials stored in racks. Units can be moved safely by truck or crane through storage and production lines. Distributed by **American Sales Engineers,** Dept. 63, 141 W. Eight Mile, Detroit 3, Mich.

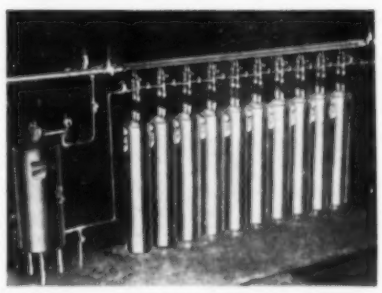
For more details circle NED-9261 on enclosed inquiry slip

MINIATURE BUZZER provides audible tone signal

Operating on from 6 to 48-v ac or dc, model No. 1702-O midget buzzer is recommended for aircraft or electronic instrument applications where medium-intensity audible tone signal is required. Device measures 1⅝ x 1⅛ x ½ in. and weighs 1½ oz. It is equipped with prosphor-bronze springs, hard-drawn silver contacts and double locking adjustments to provide variable volume and pitch. Made by **Auth Electric Co.,** Dept. NED, 34-20 45th St., Long Island City 1, N. Y.

For more details circle NED-9262 on enclosed inquiry slip

SOFT WATER SERVICE is designed for commercial users



Illustrated ten-unit softener makes soft water available to commercial users on service basis. Commercial service header accommodates multiple installations of standard zeolite type service softener and is equipped with push-button Cul-Flo-Valvs, brine maker, check valves, brine timer and brine, and rinse flow rate controller. Assembly allows for parallel softening and backwashing as well as series brining and rinsing. Softener units are connected to header assembly and regeneration equipment which is used to maintain efficiency of zeolite. Ten such tanks have 20,000-gal capacity of 10-grain hard water between regenerations at maximum flow rate of 70 gpm. Regeneration time is variable to 3 hr, and brine maker has 200-lb salt capacity. Service obtainable from **Culligan Zeolite Co.,** 1944 Shermer Ave., Northbrook, Ill.

For more details circle NED-9263 on enclosed inquiry slip

Join the hundreds of top companies who are "smart" about their business with uniforms of Reeves Army Twill. Sanforized* and vat-dyed in colors fast to sun, water and perspiration, Reeves Army Twill stays new-looking *and lasts longer* even after repeated washings. Write today for information for your business.

**Residual shrinkage less than 1%.*

REEVES BROTHERS, INC.
54 WORTH ST., NEW YORK 13, N. Y.

For more details circle NED-9264 on enclosed inquiry slip

How You Save with the NEW Niagara Method of Air Conditioning

Using "HYGROL" Absorbent Liquid

Because it absorbs moisture from the air directly, the new Niagara Controlled Humidity Method uses less, or no, mechanical refrigeration for dehumidifying. You save first costs and installing of heavy machinery. You save space, maintenance expense, power; get easier, more convenient operation.

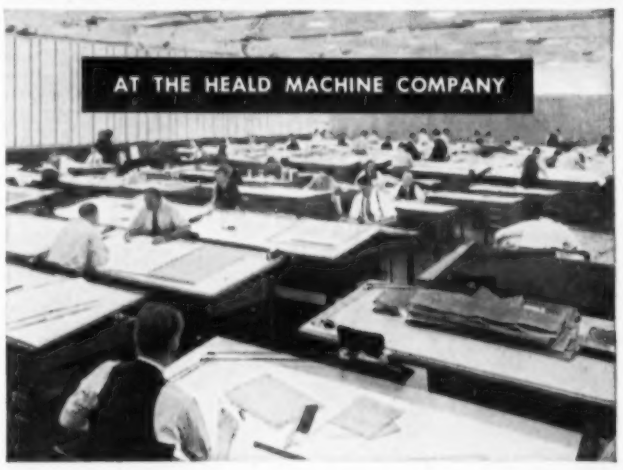
Using "Hygrol" absorbent liquid gives complete control of temperature and relative humidity. Especially, it is a better way to obtain dry air for drying processes, packaging hygroscopic materials, preventing moisture damage to metals, and obtaining better quality for chemical process and food products—or in obtaining better results in comfort air conditioning at lower refrigeration costs.

Filtered air is dehumidified by passing through a spray of "Hygrol" which removes airborne moisture. This liquid is non-corrosive; it contains no salts or solids to precipitate and cause maintenance troubles. It is continuously re-concentrated at the same rate at which it absorbs moisture, providing always the full capacity of the air conditioner, automatically.

Food Packaging under Controlled Humidity

Units provide a range of capacities from 1000 to 20,000 C. F. M. Multiple unit installations are in use successfully. Records of results are available. For further information, write Niagara Blower Co., Dept. ED, 405 Lexington Ave., New York 17, New York.

For more details circle NED-9265 on enclosed inquiry slip



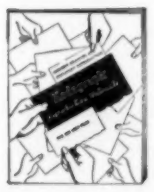
NEW SAVINGS . . . with Kodagraph Autopositive Paper

Since 1947 the production of photographic intermediates has been easier, faster, more economical for The Heald Machine Company, Worcester, Mass. *Thanks to Kodagraph Autopositive Paper.*

With this revolutionary, low-cost intermediate material, positive photographic copies of original drawings are produced *directly*—without a negative step, without darkroom handling. Furthermore, *Heald* uses its direct-process machine for the exposure operation; standard photographic solutions for development.

How "Autopositive" is used. A large percentage of the precision finishing machines manufactured by Heald are specially engineered to customer-specifications. And, frequently, Heald is requested to draw special units and fixtures on the customer's own drafting paper. These originals are reproduced on "Autopositive" (for Heald's record) and turned over to the customer when the job is completed.

Thus, when repair parts are requested, or a duplicate order is entered, shop prints can be made promptly from the Autopositives. These new intermediates have dense photographic black lines on an evenly translucent base . . . will not smudge or smear in print production . . . turn out sharp, clean prints at uniform, practical machine speeds.



A NEW FREE BOOKLET gives you full facts on Kodagraph Autopositive Paper, the revolutionary photographic intermediate material which you, or your local blueprinter can process quickly, economically. *Write for it today.*

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak TRADE MARK

For more details circle NED-9266 on enclosed inquiry slip

Cut glove costs 60%-65% and solved lost-time problem

CASE NO. 147

Problem: High injury rate and glove replacement expense due to tearing of heavy unlined rubber gloves, which exposed workers' hands to plating acids and sharp metal edges. ***Study:*** 9 months' comparative test of various type coated-fabric gloves.

Solution: Redmont 14" gauntlets, of NEOX (specially reinforced neoprene) over fabric base, gave maximum protection from snagging and biggest cost saving. (Cost only half as much as gloves previously used and gave much longer service.)

Reduce costs, improve safety and increase production with the correct gloves for your operation

Free Test Offer: Send brief description (on business letterhead) of operation, materials handled, temperature conditions. Without cost we will supply samples of type glove we recommend, plus helpful test data. Address

Edmont Mfg Co., 503 Orange St. Coshocton, Ohio

World's largest maker of coated industrial gloves—
NEOX, natural rubber and plastic

Edmont COATED FABRIC **GLOVES**

▲ For more details circle **NED-9269** on enclosed inquiry slip ▲

Write for Catalog OF USES and SPECIFICATIONS

GENERAL Industrial Pneumatics

ADD THESE 6 SELLING POINTS TO YOUR PRODUCT

SAVE
- TIME
- LABOR
- FLOORS

REDUCE
- BREAKAGE
- MAINTENANCE
- COSTS

Available in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 23"—200 to 2000 lbs. cap. for low or high speeds.

Rigid **CASTER FORKS** *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

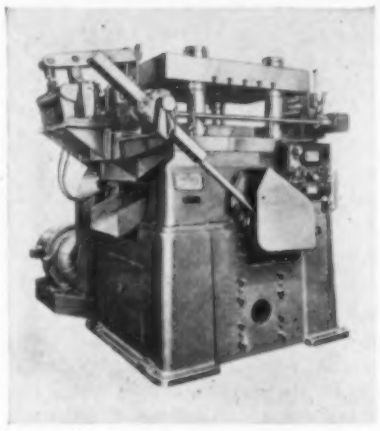
More AIR VOLUME • *More* STABILITY • *More* LOAD CAPACITY
DELIVERS *Long Mileage* IN HI-SPEED SERVICE

SEND FOR CATALOG... DEPT. 4

THE GENERAL TIRE & RUBBER CO. AKRON, OHIO

▲ For more details circle **NED-9270** on enclosed inquiry slip ▲

WIDE-BED AUTOMATIC PRESS in from 30 to 2500-ton sizes



Illustrated 175-ton wide-bed press is built to JIC standards including T-slots in top platen and complete remote control of variable speed drive. Press features die clearance of 28 in. from front to back and 60 in. from right to left. Roll feeds have 3-in. vertical adjustment and will accommodate material up to 18 in. wide. Scrap cutter has 1-in. horizontal adjustment, and pitch and adjustment of roll feeds range from 0 to 12 in. Press will take strokes up to 10 in. at speeds up to 250 strokes per minute. Remote pushbutton control panel contains master stop button; electric tachometer graduated into strokes per minute; inching, run, forward and reverse buttons for electric motor drive and manually-operated rheostat for speed control. Made by **Brandes Press Co.**, Dept. A-4, 6408 Euclid Ave., Cleveland 13, O.

▲ For more details circle **NED-9271** on enclosed inquiry slip ▲

SIDE REGISTER CONTROL electronic unit responds instantly to errors as small as 0.001-in.

Lateral position of moving web of material on slitting, rewinding and other processing machines is maintained accurately and automatically by this electronic side register control. Unit responds to signal from printed line of 1/32-in. minimum width on paper, plastic or cloth. It ignores all signals from printing adjacent to guide line on trailing edge of scanning sweep, but follows broken lines of same width and will not change web position if web breaks.

Components are rotary lens web scanner and thyratron Control panel. Scanner features tilting mounting bracket with adjustable stops to allow operation for either diffused or specular scanning. Direction of scanning can be selected by panel-mounted switch. Red and blue-sensitive phototubes will handle most color contrasts. Capable of handling motors rated up to 2/3-hp, reversing motor control feeds power to correction motor so that correction is proportional to amount of error detected by web scanner. Made by **General Electric Co.**, Control Divs., Schenectady 5, N. Y.

▲ For more details circle **NED-9272** on enclosed inquiry slip ▲

Cut Costs

Save Time and Money in Your MASKING for
- SPRAY PAINTING
- PLATING
- SAND BLASTING

with PRE-CUT QUIK-MASKS

Brady QUIK-MASKS are the answer to your masking problem! Pre-cut to exact size and shape, they stick to any surface without moistening. Protect your nameplates, machined parts, threads, holes, etc. and *completely eliminate* costly hand-cutting, use of stop-off materials, and expensive metal shields. QUIK-MASKS are made from "Scotch" Brand Masking Tapes — they can be applied fast, then when finished, they can be removed in a flash! Low-cost Brady QUIK MASKS will bring you immediate savings! Try circles, squares, rectangles from many sizes in stock or have your needs met with tailor-made QUIK-MASKS.

Write today for useful literature and *Free Samples*

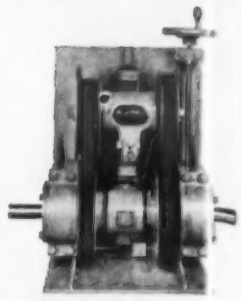
BRADY—MILWAUKEE CO.

212 West Washington Street, Milwaukee 4, Wisconsin — Division of W. H. Brady Co., Chippewa Falls, Wisconsin

▲ For more details circle **NED-9273** on enclosed inquiry slip ▲

Something New in Instantaneous, Step-Less Speed Control

2 NARROW BELTS... INSTEAD OF 1 WIDE BELT
give smoothest operation... highest ratios in smallest space... longest belt life



The tandem belt design is a feature of
WORTHINGTON ALLSPEED DRIVES

Here's a new, enlarged line of instantaneous step-less variable speed drives . . . with important exclusives you'll want to investigate for your machinery.

Worthington ALLSPEED DRIVES are now built in six sizes—from 1 to 15 hp—around the tandem-belt design which gives a *greater range* of speed variation and greatly reduces belt replacement.

Write for Bulletin AS-1600-B3 and AS-1600-B4, Worthington Pump and Machinery Corporation, Worthington ALLSPEED DRIVE Division, Holyoke, Mass.

WORTHINGTON

▲ For more details circle **NED-9274** on enclosed inquiry slip ▲

ASSURE POSITIVE IDENTIFICATION WITH

FLASH-O-LENS

ILLUMINATED MAGNIFIER

...gives a bright, clear, illuminated view of your work, magnified 5 or 7 times.

CHECK THESE FEATURES
- Fine, accurately ground lenses give perfect, detailed enlargement
- Built-in electric bulb clearly illuminates entire field of vision
- Sturdy, specially-designed Bakelite housing allows quick interchanging of lenses

TWO STYLES—Electric plug-in and portable battery models, from $10.65. Send For Free Illustrated Price Catalog

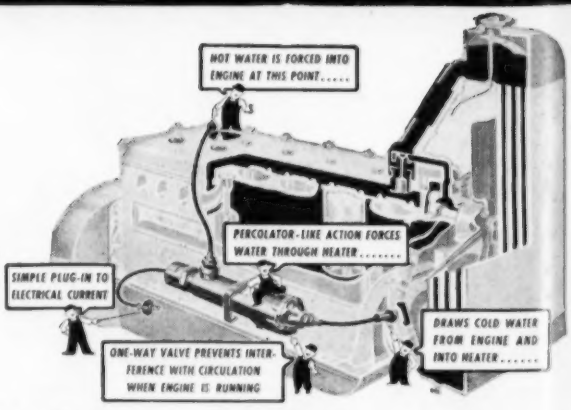
E. W. PIKE & COMPANY
492 NORTH AVE., ELIZABETH, N. J.

▲ For more details circle **NED-9275** on enclosed inquiry slip ▲

Jack Rabbit Starts in Winter ... with

KIM Hotstart

electric pre-heater for Gas and Diesel Engines



Fast action now means dollars saved in your winter operating budget. KIM Hotstart installations lick winter grief; end sluggish motors, end service tie-ups and high repair bills. KIM pre-heater means quick starts, efficient engine operation, lower cold weather operating costs all the way around.

See your International or Mack dealer or any leading auto supplier. Or write for literature.

8 outstanding features

Gives quick, easy starts
Reduces motor wear
Prolongs battery life
Reduces fuel consumption
Saves warm-up time
Cuts costs of terminal heating
For stationary or mobile engines—diesel or gas
Four models—quickly installed

KIM HOTSTART MANUFACTURING CO.
West 917 Broadway, Spokane 11, Wash.

▲ For more details circle **NED-9276** on enclosed inquiry slip ▲

Cut Polishing Time Improve Surface Quality

with "LINDE" FINE ALUMINA POWDERS

Obtain superior finishes, free from microscopic pits and scratches in a fraction of the usual polishing time. Use less abrasive and use it directly without levigation and other wasteful preparatory steps. They can also be compounded with waxes and used in stick form.

LINDE Fine Alumina Powders are characterized by ultra-fine, uniform particle size, high purity, and swift polishing action. They have gained wide-spread acceptance in polishing materials ranging from metallographic specimens to gemstones and noble metals.

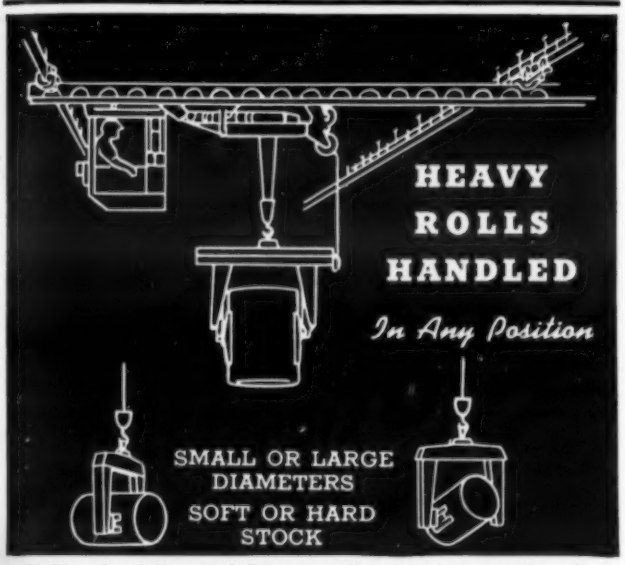
Call or write any LINDE office and we will be glad to discuss your particular polishing applications.

	Type A	Type B
Chemical Composition	Alpha Al_2O_3	Gamma Al_2O_3
Particle Size (approximate)	0.3 Microns	Less than 0.1 Microns
Hardness (Moh's) (Equivalent to crystalline material)	9	8
Crystalline Structure	Hexagonal	Cubic

The term "Linde" is a trade-mark of The Linde Air Products Company

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y. UCC Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

For more details circle NED-9277 on enclosed inquiry slip



A Cleveland Tramrail System with motor-driven roll grab picks up, delivers and sets in place rolls from 24-inch to 72-inch diameter, in lengths to 86 inches and weights up to 6,000 pounds. All motions of the crane and grab are controlled by operator without need of leaving cab.

GET THIS BOOK Write for Booklet 2012 giving details.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6601 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

For more details circle NED-9278 on enclosed inquiry slip

Extra Protection

AGAINST HIGH MOTOR COSTS

3 Great Protective Features!

- Heavy cast iron frame protects top, bottom, sides, ends. Resists corrosion, distortion, physical abuse.
- Ball bearings pre-lubricated at factory Need no attention for years. Protected against inadequate maintenance.
- Multiple-dipped and multiple-baked stator plus inter-phase insulation protect against electrical breakdown.

GET FULL DETAILS on the extra-protective features of *Safety-Circle* motors. Ask your A-C Authorized Dealer or Sales Office or write for Bulletin 51B6210. Sizes 1 to 20 hp. A-2707

ALLIS-CHALMERS *"Safety-Circle"* DRIP-PROOF MOTORS

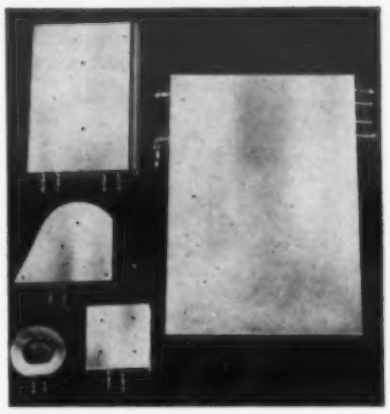
Safety-Circle is an Allis-Chalmers trademark

Allis-Chalmers, 918A So. 70 St., Milwaukee, Wis.

ALLIS-CHALMERS

For more details circle NED-9279 on enclosed inquiry slip

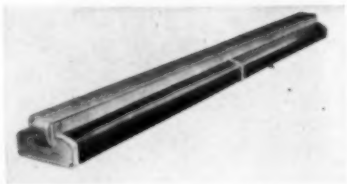
CAST-IN PLATENS are electrically-heated type



Uniform heat and long life in high and low wattage applications as well as spot heat uses are features of cast-in Thermaplatens. They are offered in aluminum for temperatures to 750° F and in aluminum bronze, brass, gray iron, copper, Meehanite and other metals for elevated temperatures. Special features such as cooling coils for fast production cycles can be incorporated. Platens have application in die heating, compression molding, plasticizing, heat sealing, branding, printing, vulcanizing and other such operations. Made by **Thermel, Inc.**, 3444 W. Lake St., Chicago 24, Ill.

For more details circle NED-9280 on enclosed inquiry slip

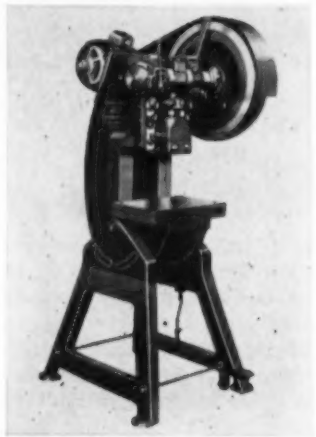
FLUORESCENT FIXTURE provides direct and indirect light



Indirect component of Industrialist Luminaires lights ceiling and minimizes severe contrasts between fixture and background. Direct component provides high level uniform illumination on working surfaces. Side panels and center V-bar reflector conceal crosswise view of lamps within approximately 25 degrees of horizontal. Side panels are quickly and easily removed without tools for cleaning or maintenance. Made by **Curtis Lighting, Inc.**, Dept. NED, 6135 W. 65th St., Chicago 38, Ill.

For more details circle NED-9281 on enclosed inquiry slip

OPEN-BACK INCLINABLE PRESS 15-ton model has 5½-in. throat depth



This positive single-stroke model 1½ Press-Rite open back inclinable press has sliding key clutch with four-point engagement ring and roller bearing mounted flywheel. Flywheel has 20¼-in. diameter, weighs 190 lb and reaches speed of 160 rpm when driven by ¾-hp 1140-rpm motor. Bolster area measures 10 x 14⅜ in., and distance from bolster to slide is 6¾ in. Diameter of crankshaft is 2⅛ in., and at pin it is 2⅜ in. Press occupies 23 x 26-in. floor space and weighs 1100 lb less motor. Available from **Sales Service Machine Tool Co.**, Dept. N, 2363 University Ave., St. Paul 4, Minn.

For more details circle NED-9282 on enclosed inquiry slip

For your pressure or temperature control design problems...

...BRIDGEPORT Bellows Assemblies

BRIDGEPORT bellows devices are used in many ways, in all industries. They may be just what you need to put *ideas* to *work*—to develop or improve products. Designed and made on order to meet your requirements. Wide range of metals and sizes. Write for details. Ask for Catalog XZ-100.

Bellows Assemblies ... Bellows ... Bellows Devices

BRIDGEPORT THERMOSTAT
Division
ROBERTSHAW-FULTON CONTROLS CO., BRIDGEPORT 1, CONN.

For more details circle NED-9283 on enclosed inquiry slip

Tough yet Gentle

Cambridge WIRE BELTS

Combine Movement with Processing Through Fire or Water

Cambridge Woven Wire Belts shrug off extremes of temperatures, corrosive agents, torsion, strain and wear. They hustle rough, bulky objects through rigorous treating processes, or convey delicate products with maximum safety.

Throughout industry, Cambridge Wire Belts are speeding up operations and cutting costs on nearly every bulk material processing job.

Steel casings being copper brazed on a Cambridge Rod-Reinforced Belt . . . a basic Cambridge design characterized by highest tensile strength, straight belt travel, and operation in temperatures to 2100° F.

Call a Cambridge Field Engineer to help you select the proper mesh, weave, metal or alloy to do your job.

Write for FREE copy of the 130-page, illustrated Cambridge Wire Belt Catalog. It's an education in belt and conveyor design, application, installation.

Cambridge Wire Cloth Co.

Wire cloth in rolls. Also specialized wire fabrications

Dept. C
Cambridge 12, Maryland

OFFICES IN PRINCIPAL INDUSTRIAL CITIES
Look Under "Belting, Mechanical" In Your Classified Telephone Directory.

For more details circle NED-9284 on enclosed inquiry slip

DPi now offers a new gauge for highest vacuum

THE DPA-38 IONIZATION GAUGE CONTROL CIRCUIT BRINGS YOU 3 BIG NEW FEATURES

1 Increased Sensitivity of the Circuit
Now the lowest scale division represents 2 x 10⁻⁹ mm. Hg. The highest vacua can be easily and accurately measured, particularly the difficult range below 10⁻⁷ mm. Hg.

2 New Direct-Reading Scale
The negative exponent of the number of millimeters of mercury is read on the range selector and the coefficient is read on the dial gauge.

3 Heavy-Duty Adjustable Automatic Relay
protects maximum life of the VG-1A Ionization Gauge Tube. A contact point that can be set at any position along the needle swing automatically operates the relay to turn off the ionization tube filament and close an external circuit.

For prices or more complete information, write: Vacuum Equipment Department, *Distillation Products Industries,* 763 Ridge Road West, Rochester 3, N. Y. (Division of Eastman Kodak Company)

DPi **high vacuum research and engineering**

Also ... vitamins A and E ... distilled monoglycerides ... more than 3300 Eastman Organic Chemicals for science and industry

For more details circle NED-9285 on enclosed inquiry slip

New Possibilities IN GRINDING TUNGSTEN CARBIDE

VISUAL GRIND

Combines 3 Different Techniques..

Image Grinding

Profile Grinding

Templet Grinding

New, but proven, Visual-Grind combines the image, profile and templet techniques in one machine, greatly broadening the scope of contour grinding. Carbide tungsten work-pieces, heretofore most difficult, are easily handled. The image technique readily grinds work-pieces whose shank diameters are larger than the contour ends. The templet method handles jobs too large to magnify on the screen. New possibilities...enormous savings... extreme accuracy!

Ask for Bulletin N-12

VISUAL GRIND THE CLEVELAND GRINDING MACHINE CO.

6514 ST. CLAIR AVENUE • CLEVELAND 3, OHIO

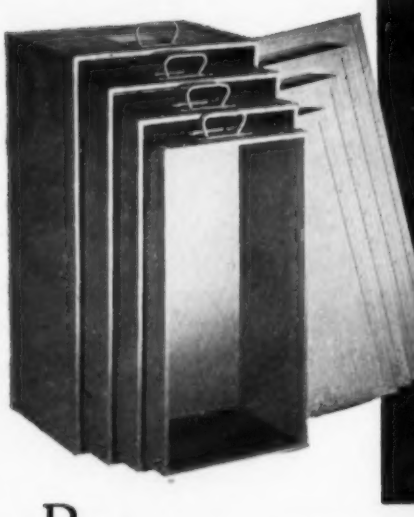
For more details circle NED-9286 on enclosed inquiry slip

GPX

CUTS COSTS AGAIN!

• • •

BUILD BETTER STORAGE AND SHIPPING BOXES WITH GPX



BECAUSE the armor-hard plastic surface of GPX is part of the plywood itself—not merely an added surface layer—it is the preferred material for tote boxes, tool lockers, storage bins and shelves. Good for a lifetime of hard wear, GPX resists the destroying effects of contact with the sharp edges and corners of industrial equipment.

Ideal for countless industrial uses, both in and around any kind of plant; it will pay you to investigate GPX today.

GPX is Weatherproof	GPX is Water Resistant
GPX is Abrasion Resistant	GPX is Stain Resistant
GPX is Vermin Resistant	GPX is Smooth
GPX is Extra Strong	GPX is Workable
GPX is Durable	GPX is Attractive

GP GEORGIA—PACIFIC PLYWOOD & LUMBER CO.

Wholesale Distribution Yards in BOSTON • CHICAGO • PHILADELPHIA • PORT NEWARK

FOR COMPLETE DATA, FILL IN AND MAIL THIS COUPON TODAY:

Georgia-Pacific Plywood & Lumber Co.
1258 Southern Finance Building
Augusta, Georgia

NAME.....

FIRM NAME.....

FIRM ADDRESS.....

.....

POSITION.....

Please send me the GPX Use Folder

For more details circle NED-9287 on enclosed inquiry slip

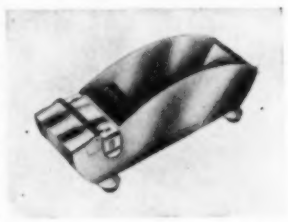
DIAL THERMOMETER
stem is adjustable to any angle

Mercury-actuated 4½-in. dial thermometers are available in standard ranges covering temperatures from −40 to 950° F and 0 to 300° C. By utilizing flexible metal line between bulb and operating mechanism, dial can be placed at any desired angle to stem. Case can also be rotated to most readable position. Steel case with glass front is dust, vapor and water-proof. Bold black numbers are easily read against white background. Thermometers are accurate within one scale division. Tapered stainless steel bulb is interchangeable with industrial types. Standard stem lengths from 3½ in. up can be supplied. Made by **Palmer Thermometers, Inc.**, 2523 Norwood Ave., Cincinnati 12, O.

For more details circle NED-9288 on enclosed inquiry slip

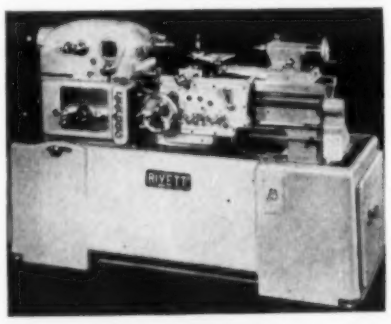
GUMMED TAPE DISPENSER
water box is removable for cleaning

Capable of accommodating one or two rolls of gummed tape up to total width of 3 in., Lightning brush and roller sealers employ four sets of rollers to obtain easy pulling. Bodies are attractively-finished heavy-gage steel and employ water box as separate unit that can be removed easily for cleaning. Made by **Lipton Mfg. Co.**, 54 W. Houston St., New York 11, N. Y.



For more details circle NED-9289 on enclosed inquiry slip

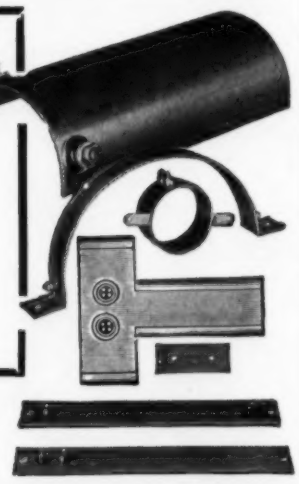
TOOLROOM LATHE
has 20-in. centers and 12½-in. swing



Sensitive instrument work and heavy-carbide cutting can be performed on model 1020S precision toolroom lathe. Features include headstock back-gearing for speeds ranging from 22 to 400 rpm, weight of 4000 lb and bed with 12¾ in. wide steel ways hardened to 60 Rockwell C. Free spindle has three-bearing mounting and operates by direct belt drive at infinitely variable speeds up to 3600 rpm. Collets mount directly in spindle without adaptor. Gear box provides 72 feeds and 84 threads, including all world standards. Pushbutton controls operate variable speed drive and electric carriage. Neutral clutch stops spindle without stopping drive, and handwheel is provided to turn headstock spindle. Design employs hardened and ground feed screws and antifriction bearings throughout. Made by **Rivett Lathe & Grinder, Inc.**, Dept. NEP-2, Brighton 35, Boston, Mass.

For more details circle NED-9290 on enclosed inquiry slip

Made-to-Fit ELECTRIC STRIP HEATERS *by* WATLOW



Adaptable Shapes Prevent Heat Waste

Write for Electric Heating Catalog.

For simple warm-up—or sustained high heat—Watlow strip units prove more efficient because they're "tailored" to your jobs . . . in a wide variety of curved, flat and irregular shapes and sizes . . and with voltage or wattage to fit your specifications.

Send blueprint or pencil sketch of your job—plus outline of heating requirements. We'll be happy to send you a prompt suggestion and quotation.

SPECIALISTS IN ELECTRIC HEATING UNITS

WATLOW ELECTRIC MANUFACTURING COMPANY
1314 N. 23d St. St. Louis 6, Mo.

For more details circle NED-9291 on enclosed inquiry slip

GOOD WIND-ABILITY

GOOD WORKABILITY

are qualities found in Essex Extra-Test Magnet Wire

Essex Extra-Test Magnet Wire has the good windability and workability necessary for random or layer winding at any speed.

It slides evenly and smoothly in place; results in maximum turns in minimum space and in coils that pack tight.

When Essex Extra-Test is used for motor armatures its extra abrasion resistance reduces possibility of damage to insulating film, no matter how narrow the slots.

When you specify Essex Extra-Test Magnet Wire for layer winding you insure against broken wires, crossed turns, runbacks, spaced turns and frequent tension adjustments. Write for prices.

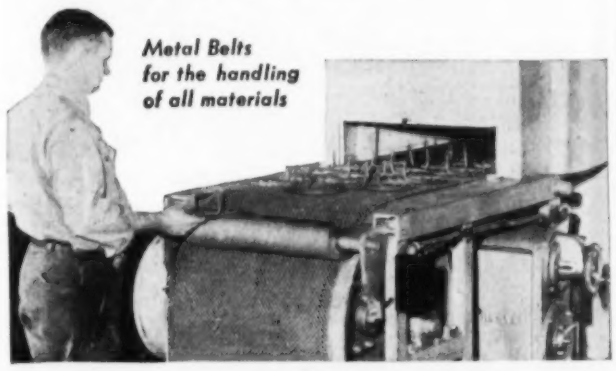
WIRE SX PRODUCTS ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

Plants: Fort Wayne, Indiana; Detroit, Michigan; Anaheim, California. Warehouses* and Sales Offices: *Atlanta, Georgia; *Boston, Mass.; *Chicago, Ill.; Cleveland, Ohio; Dallas, Texas; Dayton, Ohio; *Detroit, Mich.; *Kansas City, Mo.; *Los Angeles, Calif.; Milwaukee, Wis.; *Newark, N. J.; Philadelphia, Pa.; *Portland, Oregon; *St. Louis, Mo.; *San Diego, California; *San Francisco, California.

For more details circle NED-9292 on enclosed inquiry slip

The Right Belt for the Job BY ASHWORTH

Correct Conveyor Belt selection assures longer life, greater efficiency. Ashworth engineers have the ability to recommend the right type of belt to keep *your* product *on the move.*



WRITE FOR ILLUSTRATED CATALOG 47D

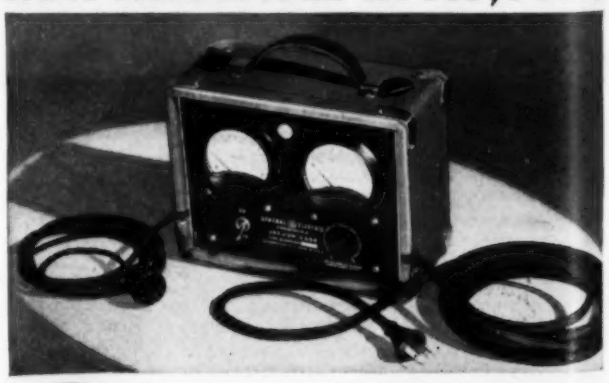
ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in Buffalo • Chattanooga • Chicago • Cleveland • Detroit • Los Angeles • New York • Philadelphia • Pittsburgh • Seattle

Canadian Rep., PECKOVER'S LTD. - Toronto - Montreal - Halifax - Winnipeg - Vancouver

For more details circle NED-9293 on enclosed inquiry slip

NOW AVAILABLE IN AC, TOO!



PORTABLE THERMOCOUPLE VACUUM GAGES

You can now get G-E portable thermocouple-vacuum-gages built to operate on 115 v, 60-cycle current. They give continuous indication with almost instantaneous response. Their accuracy in the 1-100 micron range with a calibrated gage tube is five percent of reading, or one micron, whichever is greater. And since the connection between the instrument and the system is electrical, the instrument can be disconnected without loss of vacuum. Price*: $115 with 200 micron scale, $130 with 50-division scale.

For full information ask for bulletin GEC-385A. Apparatus Department, General Electric Company, Schenectady 5, N. Y.

*Manufacturer's suggested retail price.

GENERAL ELECTRIC

For more details circle NED-9294 on enclosed inquiry slip

PRINCO'S Magnetic Thermoregulator
ADJUSTS EASILY TO .005°C!

1. ROUGH ADJUSTMENT
Mercury overflow chamber permits easy approximation to desired temperature setting.

2. FINE ADJUSTMENT
Contact electrode is positioned quickly within .005°C by means of movable external magnet.

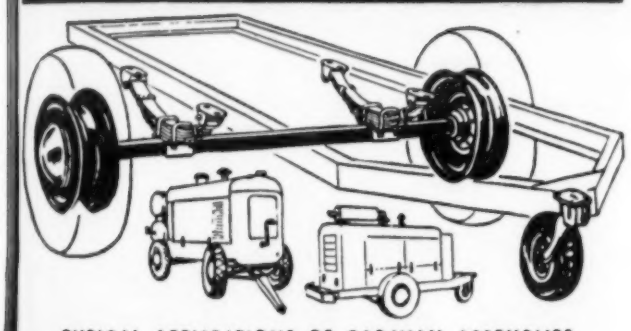
PRINCO
"MAGNA-SET"* THERMOREGULATOR

Brings new accuracy, sensitivity and ease of adjustment to the field of variable temperature controls. May be expected to control a well-agitated, constant-temperature bath of correct design to within ±0.02°C. (Under ideal conditions within ±0.002°C). Available in ranges from −35°C to +300°C, or −60°C to −35°C. Ask for Bulletin "T" which also lists a complete line of electronic and magnetic relays.

PRINCO
PRECISION THERMOMETER & INSTRUMENT CO.
1400 Brandywine Street
Philadelphia 30, Penna.
*Reg. App. for.

For more details circle **NED-9295** on enclosed inquiry slip

UNITED *Caravan* **AXLES**
COMPLETE PACKAGED ASSEMBLIES



TYPICAL APPLICATIONS OF CARAVAN ASSEMBLIES

NOW... UNITED offers you 2-wheel (single axle) or 4-wheel (front and rear axle) assemblies in complete kits to provide full spring mounted portability for many types of industrial equipment. Capacities range from 1000 to more than 12,000 pounds. Brakes and TITANIC automatic brake control optional. Retractable Swivel Caster Wheel assembly available for two wheel units.

United has a complete line including SPECIAL AXLES (straight or drop) and stub spindles made to order.

Let UNITED'S engineers solve your portable equipment problems. Write today for the new "CARAVAN AXLES" catalog.

THE UNITED MFG. COMPANY
1210 INTERSTATE STREET, BEDFORD, OHIO

For more details circle **NED-9296** on enclosed inquiry slip

PALMGREN
ANGLE VISES

HEAVY-DUTY Model

For Quick—Accurate Set-ups

PALMGREN Heavy Duty Angle Vises are built sturdy and rugged for tough, heavy jobs. They are accurately graduated in degrees, can be quickly adjusted to any angle, stay locked under severe service and save valuable hours otherwise wasted in tedious make-ready, wedging or making temporary jigs and fixtures.

Jaws are hardened and ground. Special outstanding features are the size and opening of jaws—4" Jaws open full 4"; the 6" Jaws open full 6" etc., with corresponding depth of Jaws. Vise can be used as ordinary vise when lowered to horizontal position. Swivel bases furnished if desired. Sizes 4", 6" and 8" Jaws and openings. Prompt deliveries.

Write for bulletin on complete line of PALMGREN Vises

CHICAGO TOOL & ENGINEERING CO.
Mfrs. of PALMGREN PRODUCTS for over 25 years
8378 SOUTH CHICAGO AVENUE • • • CHICAGO

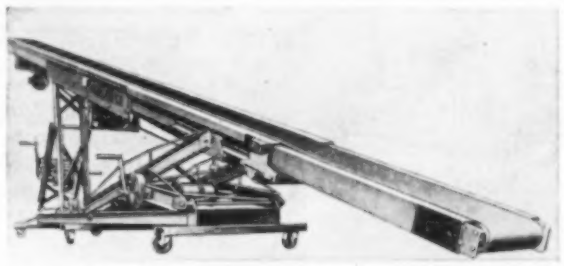
ORDER TODAY Be Sure of IMMEDIATE DELIVERIES

PRECISION WORK AT ANY ANGLE

For more details circle **NED-9297** on enclosed inquiry slip

ADJUSTABLE BELT CONVEYOR
employs extending-retracting boom

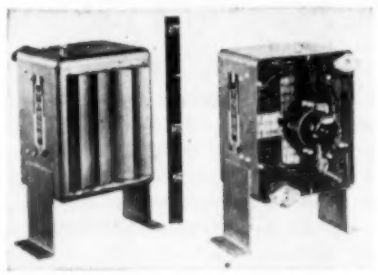
Having ability to carry full loads over entire length, Adjustoveyor belt conveyor has retractable boom controlled by separate power and can assume ten different positions. Smooth-top belt surface allows packages wider than belt to be carried without interference from supporting members. Slide type unit will carry total distributed load of 850 lb and net unit load of 150 lb before belt slips. Roller type will carry proportionately heavier loads. Standard lengths range from 8-ft closed and 14½-ft open to 32-ft closed and 56½-ft open.



All standard belt widths are available, and side rails can be supplied where necessary. Made by **Stewart-Glapat Corp.**, 1639-A Moxahala Ave., Zanesville, O.

For more details circle **NED-9298** on enclosed inquiry slip

SMALL UNIT HEATER
steam capacity is 58,200 Btu/hr



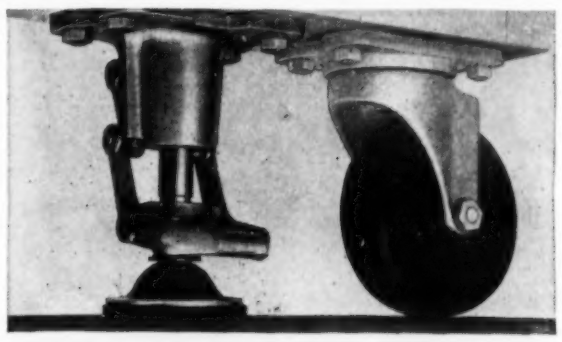
Designed for heating small buildings as well as for supplying auxiliary heat in out-of-way places, this Cab unit heater employs either steam or hot water as heating medium. Waste heat from heated jacket water of gas, gasoline or diesel engines can be utilized. Features include seamless tubes, high temperature alloy brazing, 1/25-hp ac or dc motor, compact size and weight of 57 lb. Made by **Young Radiator Co.**, 729 Marquette St., Racine, Wis.

For more details circle **NED-9299** on enclosed inquiry slip

FLUORESCENT LAMPS
four sizes are instant-start type

Line of Instant-Start flourescent lamps incorporates single-pin base for simplicity of operation and maintenance. Sizes available include 48-in. 40-w, 72-in. 65-w and 96-in. 75-w styles. Four standard colors can be obtained. Standard Cool White and Standard Warm White are designed for use in those locations where stress is on high efficiency. Deluxe Cool White and DeLuxe Warm White can be used in cool and warm atmospheres where it is important to render true color impression. Made by **Solar Electric Corp.**, Ensworth Rd., Warren, Pa.

For more details circle **NED-9300** on enclosed inquiry slip



Roll equipment or hold it with Bassick Position Locks

You can do *both*...roll equipment quick and easy (on Bassick Casters), hold it fast and firm (with a Bassick Position Lock).

Try this time-and-cost-saving pair on machines, assembly dollies, portable conveyors, tool tables, lifts, work-stands, etc.... and give greater safety and efficiency to *all* your movable equipment.

Bassick Position Locks, with a 12 sq. in. friction locking surface, grip when the foot lever is stepped on...release at the touch of a toe. Wide range of sizes. For information on position locks, casters or wheels, write to the world's largest manufacturer of casters... THE BASSICK COMPANY, Bridgeport 2, Conn. Division of Stewart-Warner Corp. *In Canada:* Bassick Division, Stewart-Warner-Alemite Corp., Ltd., Belleville, Ont.

Bassick MAKING MORE KINDS OF CASTERS . MAKING CASTERS DO MORE

For more details circle **NED-9301** on enclosed inquiry slip

BOSTITCH H4 Heavy-Duty Stapling Hammer

Three Times Faster Than Hammer and Nails

EACH EFFORTLESS BLOW drives home a sturdy ¾" Bostitch staple. ONE-HAND FREE for more accurate placing of material. STAPLE LEGS SPREAD inside the work, putting them under tension for increased holding power. HAMMER WEIGHS only 2 lb, 4 oz with load of 50 staples. Quick and easy to load. WORKERS APPROVE... no mashed fingers... no mouth infection. WRITE FOR BULLETIN 212... BOSTITCH, 728 Mechanic Street, Westerly, Rhode Island.

BOSTITCH fastens it better, AND FASTER with wire

ALL TYPES OF MACHINES FOR APPLYING STAPLES
ALL TYPES OF STAPLES APPLIED BY MACHINES

Trade-Mark "Bostitch" Registered U. S. Patent Office and Foreign Countries

For more details circle **NED-9302** on enclosed inquiry slip

"Get a Hydro Lectric"

...AND LEARN HOW PROFITABLE AND RELIABLE A LIFT TRUCK CAN BE

Full-time dependable operation is assured! Alloy-steel gear transmission eliminates old-style drive chains. For greater maneuverability, overall truck length is shorter, and truck can be steered with handle in vertical position. Differential action of front wheels makes steering fifty percent easier. Brake operates with handle in any position, for greater safety.

Get the facts! Write today for Bulletin "G".

LIFT TRUCKS, INC.
Walter Stuebing, *President*
2425 Spring Grove Ave. Cincinnati 14, Ohio

For more details circle **NED-9303** on enclosed inquiry slip

HEAR CLEARLY *in the*
QUIET ATMOSPHERE *of a* **BURGESS-MANNING ACOUSTI-BOOTH**

You can hear easily... talk comfortably in the noisiest surroundings... in a Burgess-Manning Acousti-Booth. Thick walls of sound-absorbent material soak up noise. Conversations are clearer... "private." Airy, no door... easily moved... sturdy construction.

NOTE THESE OUTSTANDING FEATURES
- Quiet inside
- Airy interior
- Movable—lightweight
- Sanitary—open construction
- Low maintenance cost—no movable or breakable parts
- Suited to any location

MAIL COUPON FOR FREE BOOKLET
Burgess-Manning Company
743-C East Park Ave., Libertyville, Ill.
Please send me your booklet describing Burgess-Manning Acousti-Booths.
Name _____
Firm Name _____
Street _____ City _____

For more details circle **NED-9304** on enclosed inquiry slip

RCS SUPER SAW AIR COOLED PATS. PEND.

Saves you more actual time, right on the job, than any other tool in your kit!

Roughing in for toilet bowl thru oak flooring completed in less than three minutes.

● **NO STARTING HOLE NEEDED**...Simply place guide next to material and "rock" tool into an upright position.

● **CUTS RIGHT THRU IMBEDDED NAILS**...wood, plaster, iron pipe, sheet metal and most other materials are easily cut—even in cramped quarters!

● **FITS HEAVY DUTY ¼" or 5/16" DRILL**...as easy as changing bits! Overall length only 10¾"; weight only 3 lbs. 6 ozs.

● **BUILT FOR CONSTANT DUTY OPERATION**... Built-in blower keeps Super-Saw cool even when used continuously and blows sawdust away from cutting line. Replaceable Oilite, phosphor bronze and high speed ball bearings throughout.

Write for Bulletin 12R

R.C.S. TOOL SALES CORPORATION
JOLIET, ILLINOIS, U. S. A.

▲ For more details circle **NED-9305** on enclosed inquiry slip ▲

Graham

THE FINEST VARIABLE SPEED DRIVE MADE

ALL SPEEDS FROM TOP TO ZERO AND REVERSE
SIZES UP TO 3 H. P.

ONCE SET, SPEED IS "ON THE MARK"
NO BELTS, TUBES, FRICTION DISCS

Check the advantages that you'll find in only the Graham Variable Speed Drive. Then, to provide the speed control that will make your fine machine even better, investigate Graham.

ALL SPEEDS FROM TOP TO ZERO, and reverse if desired.

"ON THE MARK" SPEED. No belts, tubes, friction discs or other perishable parts.

EXTREME COMPACTNESS. The only variable drive built as a streamlined extension of a standard induction motor —or available without motor.

PROVED PERFORMANCE. Standard equipment on leading machine tools, office equipment, offset presses, feeders, inspection machines, white printers, etc.

LOW COST. Does the job better, for less money, than less efficient, more costly drives.

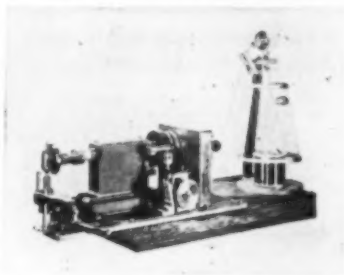
PROMPT DELIVERY ON ALL STANDARD MODELS
MAIL THE COUPON OR READER SERVICE CARD

GRAHAM TRANSMISSIONS, INC.
Dept. NED, 3754 N. Holton St., Milwaukee 12, Wisconsin
Gentlemen: Please send your latest catalog on *Graham Variable Speed Drives* up to 3 H.P.

Company.....
Name.....*Title*.....
Address.....
City.....*Zone*.....*State*.....

▲ For more details circle **NED-9306** on enclosed inquiry slip ▲

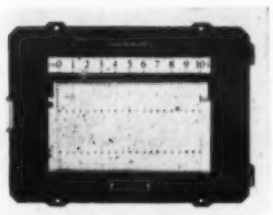
ARMATURE WINDER
maintains uniform wire tension



Small straight or skewed armatures can be wound at rate of 1000 turns per minute by model 36 armature winder. Wire is fed through hollow spindle to revolving arm which winds wire in armature slots and permits armature to remain stationary. Armature is automatically indexed, and setting up turns requires changing only one gear. Carboloy wire guides minimize wear. Machine and table occupy 20 x 30-in. space. Made by **Geo. Stevens Mfg. Co.**, 6024 N. Rogers Ave., Chicago 30, Ill.

▲ For more details circle **NED-9307** on enclosed inquiry slip ▲

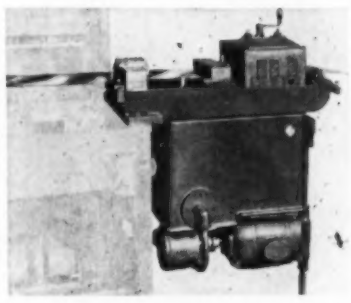
STRETCH METER
records speed ratio changes



Percentage of stretch or shrinkage of materials being processed through pairs of rolls turning at different speeds is indicated and recorded automatically by this speed-ratio tachometer. Operated by two model 724 tachometer generators driven by the respective rolls, instrument consists essentially of model 47001 Celectray ratio recorder. Ratio meter and recorder can be calibrated in per cent stretch as in yarn processing, inches per yard shrinkage as in fabric Sanforizing, percentage reduction as in metal rolling or other units which are functions of speed ratio between two rotating members. Various calibration ranges and chart graduations are available. Made by **Weston Electrical Instrument Corp.**, Tagliabue Instruments Div., Dept. 414, C14 Frelinghuysen Ave., Newark 5, N. J.

▲ For more details circle **NED-9308** on enclosed inquiry slip ▲

PUNCH PRESS STOCK FEED
handles strip up to 8 in. wide

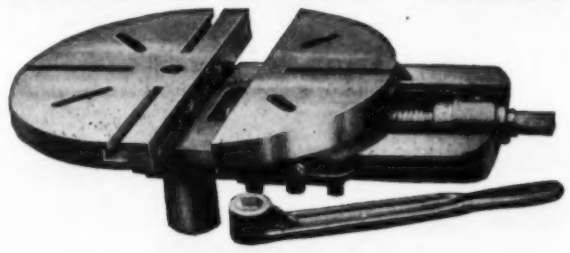


Any desired length of stock up to 24 in. is fed accurately within 0.003 to 0.005-in. with this model 8FTS Haller gripper type stock feed. Device can be used on almost any punch press and is hydraulically actuated. Installation and adjustments are made quickly, and feeder can be transferred easily from one machine to another. Actuated by press ram, unit has sufficient power to pull stock through roll straightener which is integral part of device. It can be located on bolster to feed from left, right, front or back. All moving parts operate in oil. Made by **Special Engineering Service, Inc.**, 8161 Livernois Ave., Detroit 4, Mich.

▲ For more details circle **NED-9309** on enclosed inquiry slip ▲

Try the MODERN

SAFETY DRILL TABLE



For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made in 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

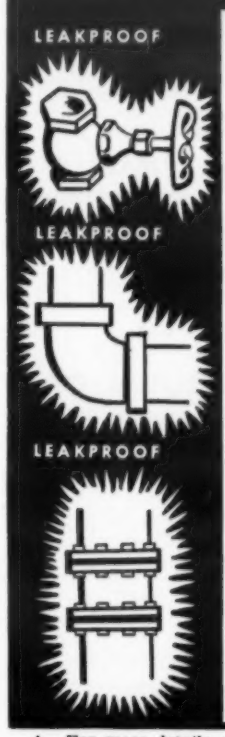
WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

MODERN MACHINE TOOL CO.
Jackson, Michigan

▲ For more details circle **NED-9310** on enclosed inquiry slip ▲

PIPE JOINTS and GASKETS STAY LEAKPROOF WITH



Plasgon

THE *FLEXIBLE* CEMENT

Plasgon sealed pipe joints or gaskets stay tight because Plasgon stays flexible. Impervious to gasoline, oil, steam and all common solvents. Resists heat up to 350°F. Invaluable in building maintenance.

Write Today For Free Tube

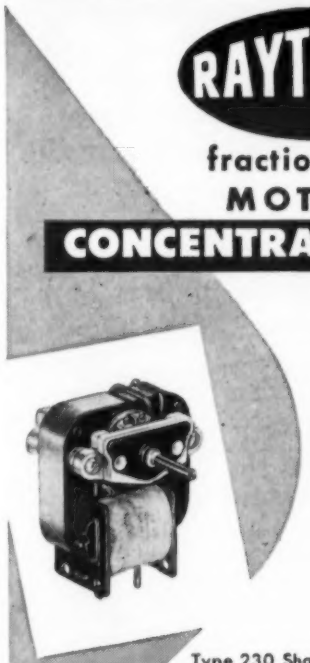
See for yourself how Plasgon will solve your pipe joint cement problems. Send name and address for a large tube — FREE.

Samuel Cabot, Inc.

1253 Oliver Bldg., Boston 9, Mass.

▲ For more details circle **NED-9311** on enclosed inquiry slip ▲

RAYTHEON
fractional hp
MOTORS
CONCENTRATED POWER



"Count on Raytheon to run it." That's what design engineers are saying. They're the men who appreciate the Creative Craftsmanship that goes into Raytheon fractional hp motors. When you want to run things, FANS, BLOWERS, HEATING EQUIPMENT, appliances or what have you—count on Raytheon motors to do the job.

Type 230 Shaded 2-Pole Motor. For continuous duty without fan cooling. 1/200 to 1/50 hp at 3200 rpm Flat Speed Torque Curve and High Starting and Pull Up Torque are characteristic of all type 230 Raytheon motors. Write for Data Bulletin 1000.

RUSSELL ELECTRIC COMPANY
MOTOR DIVISION OF **RAYTHEON** MFG. CO.
4501 S. Western Blvd. • Dept. L-25 • Chicago 9, Ill.

▲ For more details circle **NED-9312** on enclosed inquiry slip ▲

Ten thousand teeth

and every one a working tooth!

A file with a lot of its teeth shorter than their neighbors is about as efficient as a farmer's harrow with some of its spikes missing. . . . It just can't do a good job, can't do as much work, can't give you your full money's worth. Because short teeth in a file can't reach the work, they are almost totally useless. And chances are they're not sharp even after the higher teeth have worn down to their level.

Uniform height and sharpness of file teeth are an important manufacturing detail in which Nicholson file-cutting machines are considered tops. Squint your eye along the working surface of a Nicholson or Black Diamond file and note the precision.

But what you can't see, but is there too, are the toughness and uniform hardness of those teeth. EXTRA-QUALITY "GRADE A" is the banner under which these world-famous files come to you through your industrial distributor.

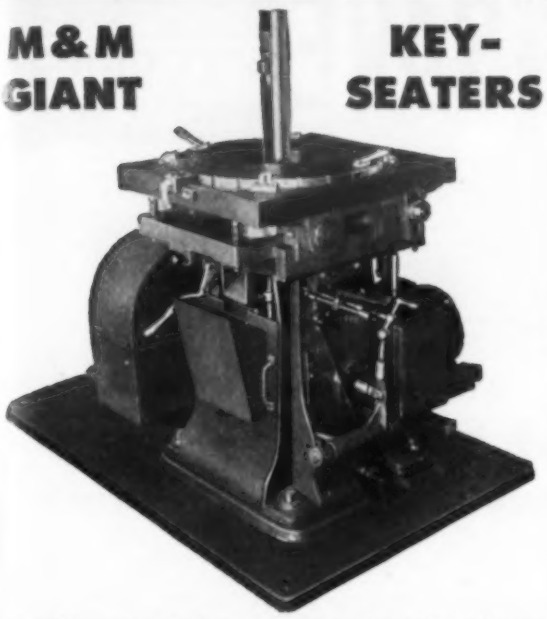
FREE BOOK, "FILE FILOSOPHY"—48 interesting, informative illustrated pages on kinds, use and care of files. For purchasing and production heads, key mechanics.

NICHOLSON FILE CO., 34 Acorn St., Providence 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON U.S.A. **NICHOLSON** BLACK DIAMOND TRADE MARK
A FILE FOR EVERY PURPOSE

▲ For more details circle **NED-9313** on enclosed inquiry slip ▲

M&M GIANT KEY-SEATERS



Giant Keyseaters, built in various sizes, speedily and accurately cut keyways or splines in pulleys, gears, and other machine parts. Special fixtures and cutters are available for those "hard-to-do" internal finishing operations which cannot be efficiently accomplished otherwise. Send us your problems.

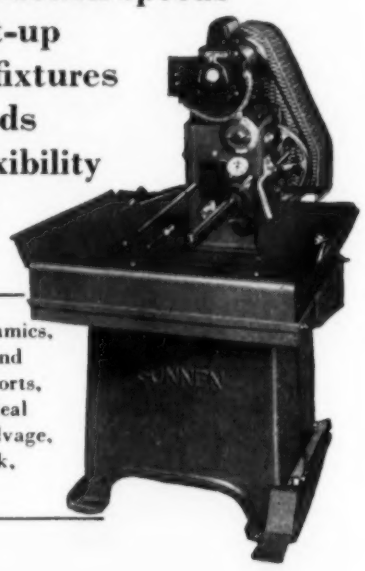
MITTS & MERRILL
1000 SOUTH WATER STREET • SAGINAW, MICHIGAN

For more details circle NED-9314 on enclosed inquiry slip

From simple deburring to exact sizing and finishing,

New Model Sunnen Honing Machine Cuts Production Costs

- Higher production speeds
- Instant set-up
- No jigs or fixtures
- Heavier loads
- Greater flexibility
- Longer life



Hones metals, ceramics, glass; open and blind holes; holes with ports, lands, keyways. Ideal for Production, Salvage, Tool and Die Work, Maintenance.

Without an exception, manufacturers using Sunnen Honing have found that their own products run faster and quieter, perform better, last longer with Sunnen Honed bearings and cylinders. That's because they get just the right surface finish and the exact dimensional tolerance required.

And now Sunnen Honing is easier and faster than ever. Recent improvements speed up loading and unloading . . . provide smooth, vibrationless operation . . . increase operator efficiency. Diameter range, .120" to 5.5"; dimensional accuracy guaranteed to .0001"; surface finish to 2 micro-inches RMS in hardened steel. Average installation costs less than $1,000. Investigate now—Sunnen Honing may be your answer, too! Write for details of the new Model MBB Honing Machine.

SUNNEN PRODUCTS COMPANY
7967 Manchester Ave., St. Louis 17, Missouri
Canadian Factory: Chatham, Ontario

For more details circle NED-9315 on enclosed inquiry slip

New Processes and Materials

CONCRETE FLOOR HARDENER
liquid type is flushed over floor

Resistance to traffic abrasion on concrete floors is increased by flushing with Flintcrust Liquid hardener. It penetrates and fills 'pores', hardening into glass-like seal which cannot be dissolved. Three - coat application seals surface completely and prevents oil, acids, alkalies and other disintegrators from penetrating concrete. Micrograph, sixteen times enlarged, shows 'hills and dales' in surface which are protected when crystals in liquid react chemically with free lime in cement. Made by **Flexrock Co.**, 3603 Filbert St., Philadelphia 4, Pa.

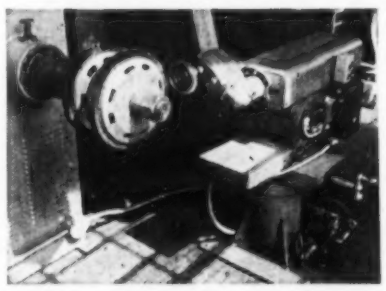
For more details circle NED-9316 on enclosed inquiry slip

SILICONE MOLDING RUBBER
ease of processing is feature

Improved mechanical and thermal properties for molding silicone rubber parts are found in 81223 compound. Many parts can be fabricated from it without prolonged oven cure and it has excellent molding and extrusion properties after only 5-minute warm-up. Because of good hot tear strength, parts with undercuts can be removed from molds easily. Being neutral in color, stock can be colored for product identification purposes. Material has high tensile strength and elongation, good electrical properties and serviceability over −85 to 550° F temperature range. Applications include diaphragms, boots, sleeves, belting, hose and mountings. Made by **General Electric Co.**, 1 Plastics Ave., Pittsfield, Mass.

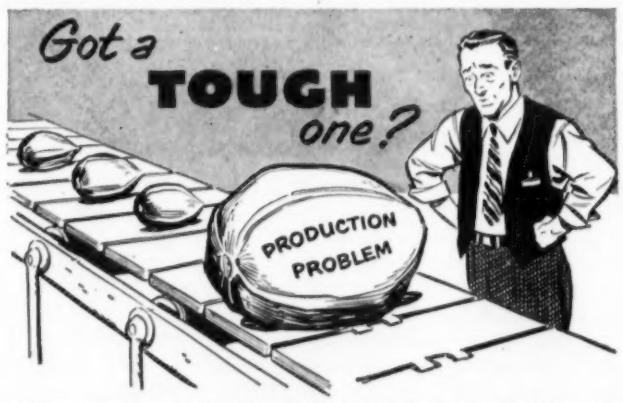
For more details circle NED-9317 on enclosed inquiry slip

GEAR DEBURRING PROCESS
utilizes brushing lathe method



Using semiautomatic universal reciprocating work piece holder and brushing lathe, improved method for gear deburring permits finishing up to 180 gears per hour. Illustration shows typical setup for gear deburring which eliminates much hand labor and produces high quality finished product. Developed by **Osborn Mfg. Co.**, Brush Div., 5403 Hamilton Ave., Cleveland, O.

For more details circle NED-9318 on enclosed inquiry slip



Chances are good that hard-working Masonite Hardboards can help crack *your* tough product and production problems —as they have on a variety of jobs in every industry.

These versatile, easy-to-work panels of wood-made-better offer 28 separate and distinct advantages. To name a few: they can be drilled, sawed, routed, bent . . . are equally strong in two directions . . . won't rust or corrode . . . take and hold most any finish . . . permanently resist moisture.

39 different types and thicknesses are available. Also available is our engineering staff . . . ready at all times to help with your particular problem. *Write today,* to . . .

MASONITE®
CORPORATION
111 West Washington Street, Chicago 2, Illinois
"Masonite" signifies that Masonite Corporation is the source of the product.

For more details circle NED-9319 on enclosed inquiry slip

FOR PROOF BEYOND COMPARE
Send for
RUBYFLUID
Soldering Flux

Special Offer

For $1 Ruby will send you one pint of liquid and one half pound of paste soldering flux.

Try it! See for yourself the amazingly stronger, smoother and longer lasting unions you get when you use Rubyfluid.

Rubyfluid
Wets out freely . . .
Has no harmful fumes . . .
Acts quickly and saves time . . .

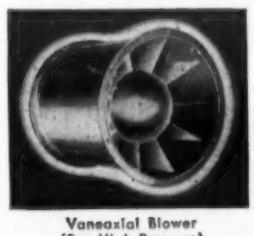
In addition Ruby will send you Free a new booklet on "How to Solder."

SEND YOUR $1 TODAY TO—
Ruby Chemical Co.
72 McDowell St.
Columbus, Ohio

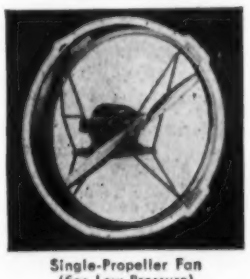
Rubyfluid

For more details circle NED-9320 on enclosed inquiry slip

We'll whip your TOUGH Air-moving job



Vaneaxial Blower (For High-Pressure)



Single-Propeller Fan (For Low-Pressure)

Want to move 50,000 CFM against 4" water gauge pressure? Sure we can do it . . . with a minimum of equipment and "cluttering-up," mighty low power consumption and long, trouble-free service.

Need better ventilation? Want to break up a hot spot? Are there points of dust or fume concentration? Those are simple to remedy, but to be *sure,* precisely the correct fan or blower, of the right size and type, should be specified.

When you write to us you put the whole weight of Hartzell engineering, longest experienced in the propeller fan industry, to work on *your* air-moving job. Application directly to your needs is handled by an experienced, competent Hartzell field office near you.

Tell us the air-movement problem which is bothering you. We'll suggest the *right* remedy, with no obligation whatever to you.

HARTZELL PROPELLER FAN CO.
DIV. OF CASTLE HILLS CORP.
DEPT. G PIQUA, OHIO
ENGINEERING OFFICES IN PRINCIPAL CITIES

For more details circle NED-9321 on enclosed inquiry slip

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS • OILS • POWDERS • PASTES
COMBINED LIQUIDS AND SOLIDS
1/500 oz. to 2 Pounds
20 to 70 Per Minute
Up to 750° F

SAVE TIME AND MONEY WITH THE MATEER ALL ELECTRIC FILLING HEAD

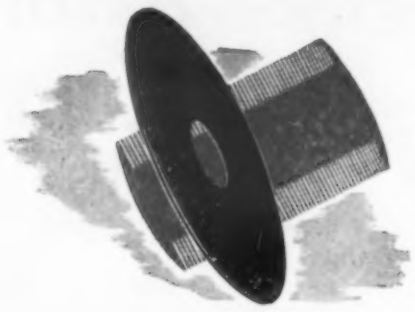
Totally enclosed, manual or automatic. Accuracy as close as ±½%. Synchronize this self contained filling head with existing production lines and processing systems.

Jacketed and electrically heated hoppers available for handling cold and hot materials up to 750° F. Hot waxes, insulating compounds and asphalts handled without difficulty.

Send full information and samples of material to be tested. Write Dept. 105 for fully illustrated bulletin.

G. DIEHL MATEER & CO.
Lincoln Highway • Devon, Pa.

For more details circle NED-9322 on enclosed inquiry slip



Another Bancroft-Hickey Original—a wafer-thin abrasive bite for a fine tooth comb.

Others said it couldn't be done—a resinous bonded abrasive wheel that thin (.013 in.) would "dish." Clearly impossible . . . yet we came up with another Bancroft-Hickey Original, a wheel that is that thin but *will not* dish. And the manufacturer of this comb is now equipped with a more efficient, 3-surface bite . . . a more economical, long-term bite than he could ever have hoped for with steel.

If you have an "impossible" grinding problem, take a tip—the answer's in a Bancroft-Hickey Original. Get in touch with us today.

Bancroft-Hickey Originals—special wheels for special purposes . . . as individual as a thumb-print.

BANCROFT-Hickey MANUFACTURING COMPANY BRISTOL, PA.

▲ For more details circle NED-9324 on enclosed inquiry slip ▲

OFFICE CONVENIENCE

FOR THE SHOP

BERGER STEEL SHOP DESK

No. 1210

. . . a time and labor-saving essential for foremen and others who must write while standing. Strong and sturdy to withstand hard usage, and to last for years. Has one roomy drawer with key lock. Pen and pencil holder at each side of hood. Office-furniture finish of green baked enamel. 33" wide, 28⅞" deep, 43" high at front and 52¼" at back, including 7" hood. Shipped in two quickly-assembled parts. Write for prices and literature on other Berger Steel Tool Room and Shop Equipment.

BERGER MANUFACTURING DIVISION REPUBLIC STEEL CORPORATION • CANTON 5, OHIO

▲ For more details circle NED-9325 on enclosed inquiry slip ▲

Compare!

Wirebounds WITH YOUR PRESENT CONTAINER!

SEND FOR THIS FREE BOOK

"What to Expect from Wirebounds" gives you a quick, clear picture of Wirebound construction principles, advantages, styles . . . gives you results of 24 actual case studies with which you can visualize the application of Wirebounds to your product. Then compare! You will soon switch to steel wire—thinner wood Wirebounds for greater protection at lower cost!

Wirebound BOXES & CRATES

Send Coupon now!

WIREBOUND BOX MANUFACTURERS ASSOCIATION
Room 1160 • 327 South LaSalle Street • Chicago 4, Illinois

NAME POSITION
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STREET AND NUMBER
CITY ZONE STATE

▲ For more details circle NED-9326 on enclosed inquiry slip ▲

New Processes & Materials

SILVER SOLDERING FLUX has powerful scavenging action

Bond of silver solder to stainless steel, Monel, nickel, copper, brass, bronze and steel is increased by AG flux. Low-temperature material acts on silver solder to reduce time lag between fluidity of solder and its adherence to parent metal. By increasing fluidity, it reduces porosity and increases spreading action and tinning coverage. Material withstands wide range of heat and resists oxidation. Flux breaks oxide on copper aluminum alloys by dispersing aluminum oxide and leaving silver solder uncontaminated. Residue can be removed by washing with hot water, and flux can be thinned with water without reducing its effectiveness. Made by **Farrelloy Co.,** 1246 N. 26th St., Philadelphia 21, Pa.

▲ For more details circle NED-9327 on enclosed inquiry slip ▲

PROTECTIVE COATING PROCESS applies polyethylene by flame spray

Polyethylene coating 1/32 to ¼-in. thick can be applied to steel tanks, tank cars and processing equipment by flame spray process. Powdered polyethylene is heated and blown through special equipment and deposited on sand-blasted surface in melted form. Solvents are not required. Tough nonporous film is formed which has resistance to practically all chemicals and corrosive materials. Coating is odorless, nontoxic and tastefree. Process developed by **Houghton Laboratories, Inc.,** 333 Bush St., Olean, N. Y.

▲ For more details circle NED-9328 on enclosed inquiry slip ▲

SCOURING PAD is abrasive-coated foam rubber

Suitable for wide variety of uses in foundry and pattern shops, Rubber Scrubber scouring pad measures 3 x 3 x ½-in. and carries flexible coating of No. 60 aluminum oxide abrasive. Pad will fit around or into any contour or irregular surface or part of pattern or mold. Applications include scouring and cleaning core driers; finishing, surfacing and polishing metal or wooden patterns; cleaning old core boxes; and removing parting lines from soft sand cores. It can be used wet or dry, and when loaded with material from prolonged use, it can be washed out with soap and water. Pads are packed 36 per box and list at $5.40. Made by **Rubber Scrubber Corp.,** 1950 Eastman St., Watertown, N. Y.

▲ For more details circle NED-9329 on enclosed inquiry slip ▲

NICKEL-CLAD COPPER in round or flat wire and rod form

Having electrical conductivity 70 per cent of copper, this nickel-clad copper features corrosion resistance, strength and resistance to high-temperature failure. Material is produced by inserting copper rod into nickel tube and drawing assembly down to size. Conductor will not oxidize, flake or become brittle during beading, stem making, sealing and exhaust operations. It can be welded to molybdenum and tungsten as well as to itself. Conductor is available in ½ to 0.031-in. diameter rods; and in round and flat wire, coils or spools, solid or standard, in all commonly-used sizes. Made by **Alloy Metal Wire Co.,** Thirteenth Ave., Prospect Park, Pa.

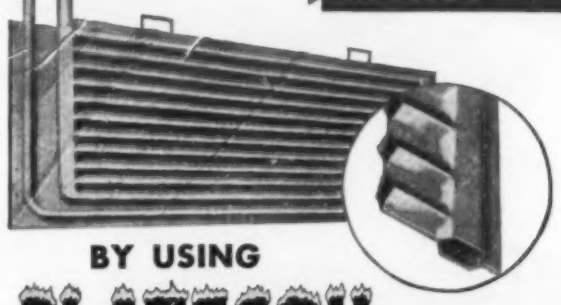
▲ For more details circle NED-9330 on enclosed inquiry slip ▲

ISOLATING PASTE aids selective hardening of metals

Increased stability is improvement feature of Isopac isolating paste which can be used with any conventional hardening process. Material keeps desired sections soft while rest of workpiece is case-hardened. Usable on many metals including high carbon steel, it prevents rapid cooling of protected areas during quenching operation. Easily applied, paste will not crack or shrink and can be knocked off quickly after quenching. Made by **Denfis Chemical Laboratories, Inc.,** 170 Pacific St., Brooklyn 2, N. Y.

▲ For more details circle NED-9331 on enclosed inquiry slip ▲

YOU SAVE STEEL MANHOURS MONEY



BY USING PLATECOIL FOR TANK HEATING AND COOLING

YOU SAVE CRITICAL STEEL because "Platecoils" require less than ½ the steel used in pipe coils of the same surface area. A 22" x 119" Platecoil weighs 95 lbs. against 239 lbs. for an equivalent 2" pipe coil. 144 lbs. steel saved. YOU SAVE CRITICAL MANHOURS because "Platecoils" are easily installed, cleaned or replaced in minutes . . . No down-time . . . No tank dumping. Many manhours saved. YOU SAVE MONEY because "Platecoils" cost up to 50% less in initial cost and require less maintenance. Investigate "Platecoils" today.

Send for complete technical manual and descriptive Bulletin No. P57

PLATECOIL Division KOLD-HOLD MFG. CO. LANSING 4, MICHIGAN

▲ For more details circle NED-9332 on enclosed inquiry slip ▲

SYMBOL STAMPS

FOR INSPECTION IDENTIFYING CODING DATING TESTING GRADING

Manufacturers in every kind of industry are now using Matthews Symbol Stamps (both rubber and steel) for confidential inspection, coding, dating or product analysis marking. Inspectors, welders and workmen in each phase of production "sign" for operations which they perform . . . raising standards of workmanship and speeding up manufacturing processes.

Matthews Symbol Stamps can be supplied with standard designs, or with any special lettering or designs you wish to create.

Write Matthews today for literature. "BULLETIN A-1" gives complete details and hundreds of stock symbols, from which you may make the proper selection.

JAS. H. MATTHEWS & CO.
3943 FORBES ST., PITTSBURGH 13, PA.
NEW YORK BOSTON PHILADELPHIA CHICAGO NEWARK SYRACUSE CLEVELAND CINCINNATI DALLAS BIRMINGHAM LOS ANGELES

▲ For more details circle NED-9333 on enclosed inquiry slip ▲

FOR LOW COST LIFTING and LOWERING

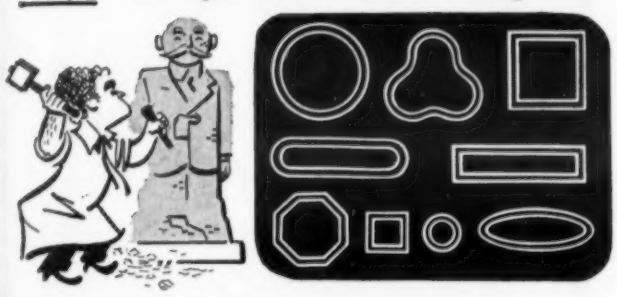
The portable Keller Air Hoists. One man can lift, lower loads effortlessly from creep up to 17 ft per min. Hoists weigh only 30 lb in ½-ton, ¼-ton, 300-lb capacities and 75 lb for 1-ton. Provide maximum power with minimum air consumption, servicing, and attention.

KELLER *Pneumatic Tools*

KELLER TOOL COMPANY, GRAND HAVEN, MICH.

For more details circle NED-9334 on enclosed inquiry slip

"Shape" is important in small tubing too!



When you have a design or production problem involving small tubing, shape may be all-important. At Superior we draw round or shaped tubing to standard specifications, or to your own designs, in scores of analyses of Carbon, Alloy and Stainless Steel, Nickel, "Monel", "K-Monel", "Inconel" and Beryllium Copper. The tubing is furnished in cut, multiple or random lengths, accurately dimensioned to close tolerances, with bright, clean inside and outside finish.

Get more information about Superior Tubing now. Review your requirements with a Superior representative, without obligation. Write today.

FREE—Ask for a copy of Bulletin No. 31. It's packed with tubing data.

Superior THE BIG NAME IN SMALL TUBING

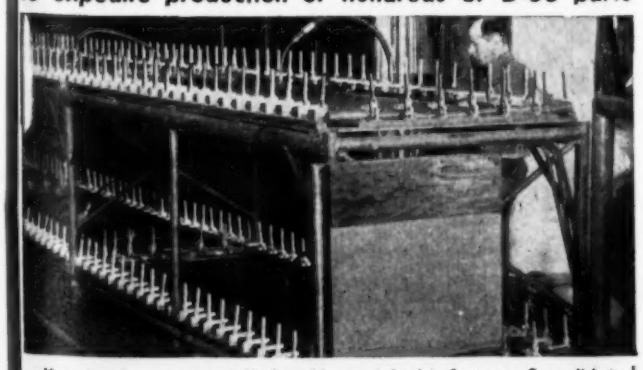
All analyses .010" to ⅝" O.D.
Certain analyses (.035" max. wall) up to 1⅜" O.D.

SUPERIOR TUBE COMPANY • 2018 Germantown Ave., Norristown, Pa.

For more details circle NED-9335 on enclosed inquiry slip

Another battery of *KNU-VISE CLAMPS*

to expedite production of hundreds of B-36 parts



Knu-vise clamps are installed on this special table fixture in Consolidated Vultee's San Diego plant to provide an air-tight seal around a rubber blanket. Beneath the blanket are parts for B-36 bombers which are joined by Metlbond (a metal adhesive) instead of rivets. The fixture is moved into a furnace where heat and pressure are applied.

The quick acting clamps expedite production of hundreds of B-36 parts—the clamps can be secured and unlocked in a fraction of the time required if screws were used.

Approximately 800 Knu-vise clamps are installed on fixtures in Convair's Metlbond assembly department. On this fixture, the clamps are spaced at 5-inch intervals.

Send for Complete Catalog
Sales Representatives in Principal Cities

KNU-VISE PRODUCTS LAPEER MFG. CO.
3056 DAVISON ROAD • LAPEER, MICHIGAN

Western Division, 422 Magnolia Street, Glendale, California
Canadian Stocking Distributor: Higginson Engr. Sales
P. O. Box 23, Hamilton, Ontario

For more details circle NED-9336 on enclosed inquiry slip

New Processes & Materials

STAINLESS STEEL SHIM STOCK packaged in handy dispenser carton

Attractively packaged in dispenser type box, this stainless steel shim stock is recommended for use where noncorrosive steel is needed. Mirror bright type 302 spring temper stainless has been found most suitable for general application. It can be obtained in wide selection of thicknesses ranging from 0.001 to 0.031-in., and standard sheet size is 6 x 50 in. Obtainable from **Precision Steel Warehouse, Inc.**, Mfg. Div., 4403 W. Kinzie St., Chicago 24, Ill.

For more details circle NED-9337 on enclosed inquiry slip

OPEN GEAR GREASE is tenacious and highly absorptive

Open-gear grease No. 32 is supplied in cartridge form to fit specially-nozzled gun applicator which ribbons grease and frequently allows application while gears are moving. Grease is water repellent, has high resistance to removal, retains plasticity with temperatures below freezing and has melting point above 400° F. Type is also available with density suitable for sub-zero applications. Made by **Keystone Lubricating Co.**, 3100 N. 21st St., Philadelphia 32, Pa.

For more details circle NED-9338 on enclosed inquiry slip

PLASTIC-IMPREGNATED PACKING is supplied in braided form

Blue asbestos yarn of Palmetto 1330 packing is impregnated with Du Pont Teflon for resistance to acids, alkalies, corrosive chemicals and solvents in temperature range from −150 to 550° F. Strands of yarn are tightly braided and finished to avoid leakage through cross section. Packing can be cut or formed easily to any required size. Material is available in sizes from ⅛-in. square up on 1-lb spools, in 5½ and 13-lb boxes or on 25, 50 and 100-lb reels. Made by **Greene, Tweed & Co.**, 333 Elm St., North Wales, Pa.

For more details circle NED-9339 on enclosed inquiry slip

INSULATING LAMINATE for high-frequency applications

Desirable electrical and physical properties have been combined in Insurok grade T-812 electrical insulating laminate. This paper-base phenolic material is particularly suited for high-frequency applications. It also features excellent punchability and low moisture absorption. Insulation resistance of 1/16-in. sheet is 1,000,000 megohms after humidity conditioning. Material is available in complete range of sheet sizes and thicknesses. Made by **Richardson Co.**, 2798 Lake St., Melrose Park, Ill.

For more details circle NED-9340 on enclosed inquiry slip

Kester Solder

Kester Flux-Core Solders are made only from newly mined grade A tin and virgin lead. Fluxes are chemically and scientifically correct.

Eliminates Rejects

Rejects are eliminated when the correct solder for the job is used. Kester makes over 100,000 different types and sizes of Flux-Core Solder.

Faster

Using Kester "Speed" Solders will increase the output of your assembly lines.

KESTER SOLDER COMPANY
4201 Wrightwood Avenue
Chicago 39, Ill.
Newark, N. J. Brantford, Can.

KESTER SOLDER

SEND FOR FREE MANUAL: "SOLDER AND SOLDERING TECHNIQUE"

For more details circle NED-9341 on enclosed inquiry slip

HOW TO SAVE MONEY*

...ON YOUR PRODUCTION COSTS

If the machines or equipment you manufacture require gearing, speed reducers or motorized reducers, you can save substantially by standardizing on Ohio Stock Gears and Speed Reducers. They are precision made in every detail and fit perfectly into most applications. Produced in quantity runs they cost less and save the delivery time ordinarily required for "specials."

...ON YOUR MAINTENANCE COSTS

With Ohio Stock Gears and Reducers on your production machines you are sure of long, steady performance. However, when replacement becomes necessary, they cost less and you eliminate expensive down time waiting for deliveries.

ESTABLISHED 1919
THE OHIO GEAR COMPANY
1320 East 179th St. • Cleveland 10, Ohio

***STANDARDIZE ON OHIO STOCK GEARS AND SPEED REDUCERS**

Ohio Stock Gears and Speed Reducers are ordinarily available from your nearest distributor's stock.

OHIO GEARS

For more details circle NED-9342 on enclosed inquiry slip

NEW MEAD INDUSTRIAL AIR POWER CATALOG Ready!

Full of Suggestions for **FASTER, CHEAPER PRODUCTION!**

Illustrates, describes Air Cylinders, Valves, air operated Presses, Vises, Chucks, Hammers, Drill Press Feeds, Work Feeders, Timers, semi-automatic combinations, etc.
**Pneumatic Cylinders*
Write for Complete Catalog!

MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE., DEPT. NA-120, CHICAGO 41, ILL.

For more details circle NED-9343 on enclosed inquiry slip

4 TIMES HIGHER SNAG RESISTANCE

(standard needle test)

SURETY
SURESEAL
Synthetic Rubber
INDUSTRIAL GLOVES

plus.. 10 times higher abrasion resistance, much higher chemical resistance—Sureseal Synthetic Rubber is miles ahead on all counts. That's why Sureseal Gloves give you longer wear, greater hand safety, *much* lower glove costs.

For an extra margin of safety, extra protection against dermatitis, get Sureseal Gloves with Surety's patented Turn-Cuff—cuff turned up prevents liquids from running onto arms or inside gloves, cuff turned down gives two-inch longer protective gauntlet.

Ask your distributor about Sureseal Gloves—or write direct.

THE SURETY RUBBER CO. CARROLLTON, OHIO DEPT. N

In Canada: Safety Supply Company, Toronto, Ontario

For more details circle NED-9344 on enclosed inquiry slip

KLIXON PROTECTORS
Keep Motors Running
in De Walt "Power Shop"

The versatile De Walt "Power Shop" does the work of 10 single purpose machines. It's a variety saw, cut-off saw, dado machine, shaper, router, tenoner, sander, horizontal drill, grinder or metal cutter.

De Walt Engineers know from experience that Klixon Protectors *add an extra* to the machines by preventing motors from burning out. In fact their specifications state, "MB motors have manual toggle switch *with thermal overload protection, KLIXON type, built into the motor.*"

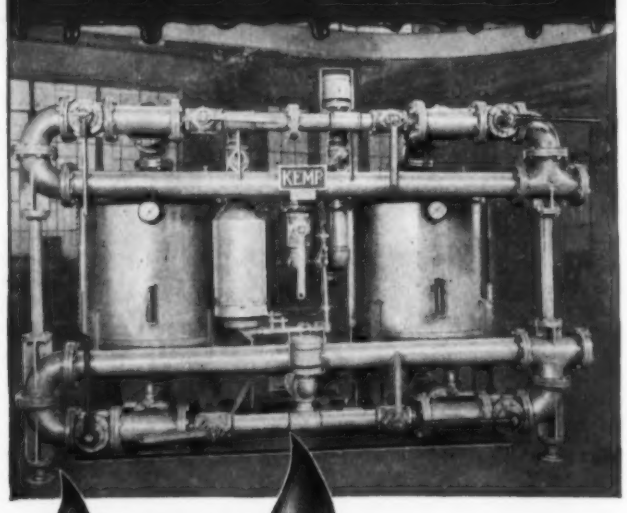
A Klixon Protector provides positive protection against overheating and burning out. Should the motor stall or an overload occur, the protector cuts the power "off". When it cools sufficiently it snaps the power "on" again either by pushing the red button or automatically depending on the type of protector used. Always specify motors with Klixon Protectors.

De Walt Stationary "Power Shop" with inherent Klixon Overheat Protection

KLIXON SPENCER THERMOSTAT
Division of Metals & Controls Corp.
1912 Forest St., Attleboro, Mass.

For more details circle NED-9345 on enclosed inquiry slip

STOP MOISTURE DAMAGE



Kemp Dynamic Dryers solve moisture control problems—combine dependable operation with low operating cost!

YES, no two ways about it, Kemp Dynamic Dryers *control moisture* at rock bottom prices. For example, a Kemp unit drying gas may cost you as little as ¼ *cent per mcf!* And that ¼ of a cent includes *all* labor and utility costs—plus the cost of the equipment amortized over a five-year period! But low operation cost is just part of the Kemp story.

SIMPLE OPERATION

Kemp Dynamic Dryers are flexible . . . offer *manual, semi-automatic* or *automatic* operation. Desiccant is especially selected and compounded for the particular duty. Units are available for drying *air, gases* or *liquids* . . . for controlling humidity in large or small areas. Choose gas, electric or steam regeneration . . . with or without cooling units.

GUARANTEED PERFORMANCE

No matter what your moisture control problem may be . . . specify Kemp first. Chances are there is a standard design that will be ideal for your plant . . . and at the same time save you money! Performance to your specifications is guaranteed! For full information mail coupon for special bulletin.

KEMP OF BALTIMORE *DYNAMIC DRYERS*

CARBURETORS
BURNERS
FIRE CHECKS
ATMOSPHERE & INERT GAS GENERATORS
ADSORPTIVE DRYERS
METAL MELTING UNITS
SINGEING EQUIPMENT
SPECIAL EQUIPMENT

THE C. M. KEMP MFG. CO., Dept. B-12, 405 E. Oliver St., Baltimore 2, Md.
Gentlemen: Please send me information Bulletin D-27. We want the facts on drying ☐ air ☐ gas ☐ liquids.
Name.....
Company.....
Address.....
City..... Zone..... State.....

For more details circle NED-9346 on enclosed inquiry slip

New Processes & Materials

CENTRIFUGAL CASTINGS up to 12-in. OD and 13-in. long

Additional equipment added to manufacturing facilities enables company to offer larger sizes of centrifugal castings than formerly. Typical castings include centrifugally cast liners, sleeves, rolls, rings, bushings and tubes in bronze alloys, rough or machined within listed specifications. Custom service offered by **American Non-Gran Bronze Co.,** 200 Lancaster Ave., Berwyn 20, Pa.

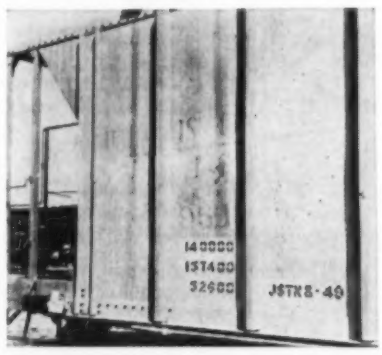
For more details circle NED-9347 on enclosed inquiry slip

COMPOSITE METAL LAMINATE is electrolytic copper-clad aluminum

Consisting of aluminum and electrolytic copper bonded together by solid phase bonding process, Alcuplate laminate can be supplied with copper on one or both sides. Single-clad material is generally furnished in thickness ratio of 80 per cent aluminum and 20 per cent copper; double-clad material is in common ratios of 5/90/5 and 10/80/10, while other ratios can be supplied if desired. Sheet or strip is normally supplied in widths up to 6 in. and thicknesses up to ⅛-in. Applications for this metal laminate include its use as conductor of heat or electricity parallel or perpendicular to surface and as clips, shims, bushings and terminals. Made by **Metals & Controls Corp.,** General Plate Div., 1500 Forest St., Attleboro, Mass.

For more details circle NED-9348 on enclosed inquiry slip

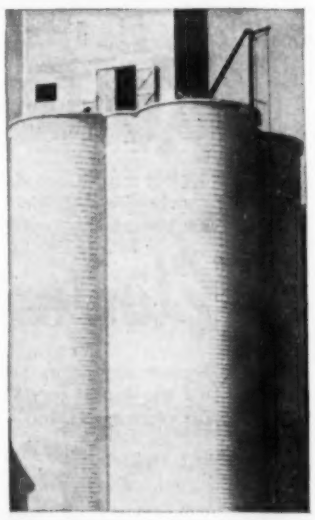
PROTECTIVE CAR FINISH is acid and alkali resistant



Corrosive action of acids, alkalies and other chemicals on railroad hopper cars and similar equipment is forestalled by Carclad protective finish based on vinylite resins. Test railroad cars painted with this material carried such cargoes as cement and soda ash for more than 3 years yet remained free of corrosive effects even where sledge hammers had been used to break cargo loose. In addition to withstanding corrosive effects, this finish will resist repeated scrubbing and washing with strong cleaning solutions. Aromatic hydrocarbons, ketones and esters affect finish to some extent but as long as no abrasion occurs, film will harden to its original state when allowed to dry. Finish can be applied with same equipment used for synthetic lacquer or enamel. Made by **Sherwin-Williams Co.,** Dept. E, 101 Prospect Ave. N. W., Cleveland 13, O.

For more details circle NED-9349 on enclosed inquiry slip

THE DECISION OF A LIFETIME



It is literally true that the decision to install Neff & Fry Storage Bins is a lifetime decision, for these Super-Concrete Stave structures can be expected to last beyond the ruling generation.

Many of the N & F Bins erected 30 years ago are now serving the sons of the purchasers. This longevity is due to the endurance of the Super-Concrete Staves. The staves are formed under hydraulic pressure, giving them rocklike density and high compressive strength. They do not rust, rot or burn. They form walls so rugged that heavy machinery is mounted upon them without additional supports. N & F Bins have often withstood tornadoes which destroyed adjacent buildings and uprooted nearby trees.

If you have flowable bulk materials to handle and store, get all the facts about N & F Bins. Our catalog, containing numerous photographs of installations, is yours for the asking.

The NEFF & FRY Company
East Central Avenue, Camden, Ohio

NEFF & FRY STORAGE BINS

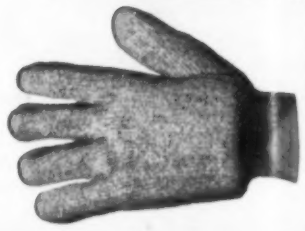
For more details circle NED-9350 on enclosed inquiry slip

1=7

One Jomac glove outwears seven ordinary work gloves.

Now more than ever before you need the best in gloves to speed production.

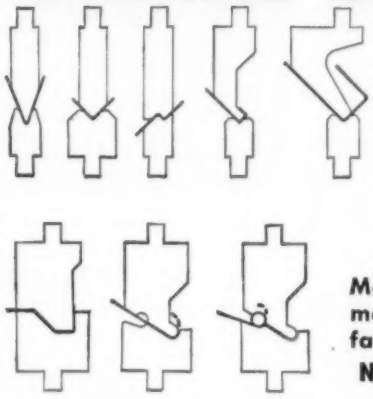
Jomacs are
Washable
Cut-Resistant
Flexible
Heat-Resistant
Reversible
Don't Snag or Tear



JOMAC WORK GLOVES
C. WALKER JONES CO.
6148 N. Lambert St. Philadelphia 38, Pa.

For more details circle NED-9351 on enclosed inquiry slip

BRAKE DIES



MADE FROM FORGED CHISEL STEEL BILLETS

Made by the makers of the famous SEMCO NIBBLER PRESS

- MANY STILL IN USE EVEN AFTER 10, 20 AND EVEN 30 YEARS.
- THEY COST MORE BUT THEY LAST FOR YEARS.

Write for Estimates on Your Work and Ask for Latest Literature

SEMCO
SERVICE MACHINE COMPANY
INCORPORATED
202 MILLER STREET, ELIZABETH, N. J.

For more details circle NED-9352 on enclosed inquiry slip

NEW IMPREGNATED FELT GASKETING MATERIAL
PREVENTS CORROSION AND ELECTROLYSIS
SEALS AGAINST DUST, WIND & WATER

CHROME LOCK consists of a high-grade felt, impregnated with a specially formulated blend of permanently thermoplastic resins, plasticicers, inert pigments and chromates. Prevents corrosion on original installations — stops corrosion when applied to rusty joints. Chrome Lock also inhibits *electrolytic action* between dissimilar metals.

CHROME LOCK has outstanding anti-aging qualities and will not deteriorate. Tests prove Chrome Lock far outlasts rubber. Chrome Lock is the ideal seal wherever anti-corrosion, anti-electrolysis and anti-aging properties are required! Read these added features:

★ **EASY TO APPLY:** Pressure-sensitive adhesive back.
★ **ANTI-WICKING:** Non-soluble in water or saline solutions. Prevents seepage under normal pressure applications.
★ **LIGHTER FLANGING MATERIALS:** Low pressure compressibility reduces required bolt torque pressures.
★ **MANY TYPES:** (Type S) Standard Material.
(Type N) Flame Resistant. Conforms to BuShips Spec. 33F8.
(Type OR) Oil Resistant. Used whenever S.A.E. 10-60 oils are present.
★ **MANY SIZES:** Thicknesses of 1/64", 1/32", 1/16", ⅛" and ¼". Widths from ¼" to 66".
★ **CUT GASKETS:** Made to your specifications.
★ **NATIONWIDE SERVICE:** Sales engineers in all principal cities.

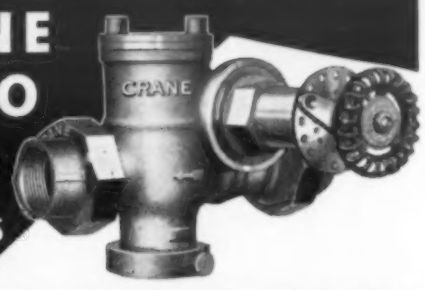
Write on your company letterhead for new, 6 page Engineering Folder No. SP-1053

Manufactured by Products Research Company
SPRING PACKING CORPORATION
332 S. MICHIGAN AVE. • CHICAGO 4, ILLINOIS

For more details cricle NED-9353 on enclosed inquiry slip

POSITIVE PROTECTION AGAINST PRESSURE BUILD-UP

CRANE no. 960 AUTOMATIC PRESSURE REGULATORS



Crane Brass Regulators not only reduce pressure, they hold it at the desired point regardless of moderate fluctuations in inlet pressure. Even when outlet steam and air are not being used, outlet pressure cannot build up to inlet pressure.

Once installed, Crane No. 960 Regulators work automatically ... require only periodic inspection and cleaning. All working parts are easily renewable. Piston operates in removable liner. Any wear is on liner—not on body walls.

Made for initial inlet pressures up to 250 pounds steam or air, in four outlet pressure ranges: 1 to 10, 5 to 30, 20 to 100, or 90 to 200 pounds. Sizes up to 2 in. For complete information, SEND FOR FOLDER AD-1607A.

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

EVERYTHING FOR EVERY PIPING SYSTEM

CRANE

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

For more details circle NED-9354 on enclosed inquiry slip

Heat it BETTER and FASTER for *LESS!*

with CHROMALOX *Electric* HEATING UNITS

USE CHROMALOX Electric HEATING UNITS *for efficient and accurate heat to fit your EXACT needs!*

Chromalox Heaters give you fast, uniform, "on the spot" heat at low initial cost and low operating costs in hundreds of applications. They come in types, sizes and capacities to fit every specific production need. Check their time and money saving advantages now! On-the-job engineering service without obligation.

For details on Chromalox Heaters
Send for the valuable, informative Catalog 50. It lists many of the more than 15,000 types, sizes and ratings of Chromalox Electric Heaters for hundreds of uses.

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

See other advertisement on page 4

CHROMALOX 1B-5

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-9355 on enclosed inquiry slip

Cut costs with the NEW ROTOR SCALER

For these jobs:

Weld slag removal	Scaling
Spatter cleaning	Star drilling
Weld peening	Light chipping

Call in the Rotor Analyst to demonstrate it on your work.

THE ROTOR TOOL CO.
CLEVELAND, OHIO

For more details circle NED-9356 on enclosed inquiry slip

New Processes & Materials

FINISH PLASTER AGGREGATE eliminates mixing lime and gaging

Intended for trowel use only, Zonolite finish plaster aggregate is used in combination with unfibered gypsum to produce smooth hard finish over either vermiculite or sand base coat. Because aggregate and gypsum are all that are required for mix, hand operation of mixing lime and gaging plaster is eliminated. Advantages of using material include quick spreading with long sweeps of trowel and its resistance to chipping or marring when nails or picture hooks are driven into wall. Made by **Zonolite Co.,** Dept. LS, Room 1263, 135 S. La Salle St., Chicago, Ill.

For more details circle NED-9357 on enclosed inquiry slip

PHENOLIC PLASTIC REPAIR KIT does not require special tools

Breaks, dents, holes, scratches and other defects in wood, metal, plastic, glass and fabric can be repaired with this phenolic plastic repair kit. Supplied with necessary solvents, it can be applied by brush or spray and provides permanent water, acid and alkali-proof surface. In order to make repair, area to be treated is sanded, phenolic plastic cloth applied and phenolic plastic metal brushed on. Kit lists for $5.95. Made by **Pioneer Chemical & Mfg. Co.,** 1857 Columbus Rd., Cleveland 13, O.

For more details circle NED-9358 on enclosed inquiry slip

PRESSURE-SENSITIVE TAPES for riveting and plastic masking

Utilizing pressure-sensitive adhesive which enables them to stick in place on contact, these specialized tapes are designed for specific applications. Cellophane fiber tape No. 670 is used in cementing Plexiglas on aircraft to mask against spread of solvents. It has tensile strength of 40 lb per inch of width and thickness of 5.2 mils. Rolls of 2592-in. length are available in widths of ½, ¾, 1 and 2 in.

Illustrated riveter's tape No. 775 is of transparent acetate fiber with adhesive on edges only. It holds row of rivets in place for riveting, yet can be stripped away in one piece afterward. There is no adhesive in center to stick to rivet heads. This tape is made in ¾ and 1-in. widths 1296-in. long. It has 5-mil thickness and tensile strength of 25 lb per inch of width. Made by **Minnesota Mining & Mfg. Co.,** Dept. NED-SW, 900 Fauquier St., St. Paul 6, Minn.

For more details circle NED-9359 on enclosed inquiry slip

Electric Eel cleans sewers and drains with SAFETY

New DOUBLE CABLE protects operator. *Speedy, more efficient.* Flexible Outer Sheath for Safety

Most Powerful Machine of its Type

- *Full Electric Reverse for Rapid Withdrawal*
- *Increased Speed Through Greater R.P.M.*
- *Lighter Due to New Aluminum Frame*
- *Rotating Inner Cables*
- *Lines 1¼" to 8" Diameter*
- *Runs up to 200 Ft.*
- *Over 6,000 in Use*
- *10 Years in Production*
- *Each Tool Engineered for a Particular Purpose*

Knives and tools are available for any pipe cleaning job.

Write for more information. Dept. NED

OHIO TOOL & ENGINEERING CO., Springfield, Ohio

For more details circle NED-9360 on enclosed inquiry slip

Tiger Tooth BEAM LIFTING HOOK

$40.00 3000 LB SIZE

$45.00 6000 LB SIZE F.O.B. CHICAGO

One Man Can Lift, Lower, or Nest Beams of All Sizes

Mail Your Order Direct to...

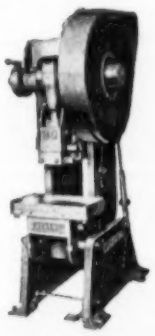
One man drops Tiger Tooth over flange of beam and signals crane operator to lift. No block or sling chain necessary. No tricky adjustments to make it bite. Speeds up handling and cuts costs in structural shops, steel mills, material yards, finishing yards.

MIDLAND STRUCTURAL STEEL CORPORATION
20 N. WACKER DRIVE, CHICAGO, ILL.

For more details circle NED-9361 on enclosed inquiry slip

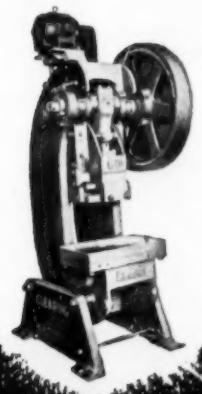
NOW... OBI Presses by CLEARING

Now you can get, in open back inclinable presses of 30 tons capacity and larger, the same advanced engineering and modern construction principles which have made large Clearing presses the overwhelming choice of costwise production men.



Frames are steel weldments—pioneered by Clearing in the press field—to give these O.B.I. presses greater rigidity, which means more precise operation and longer life for your dies. The swing key positive clutch or the packingless pneumatic clutch, optional on most models, mean quick, trouble-free action.

Send for your free copy of Bulletin 211 for details about this new line of presses.



CLEARING MACHINE CORPORATION
6499 W. 65th Street ★ Chicago 38, Ill.

For more details circle NED-9362 on enclosed inquiry slip

Handling Time in PUNCH PRESS FEEDING CUT 25%

LYON-Raymond
Hydraulically Operated
Sheet and Strip Feeding Table

Want to cut punch press feeding time 25% *or more?* Lyon-Raymond Elevating Equipment is the answer—because it eliminates stooping, lifting and tugging. This has been proved in plant after plant by scientific time studies.

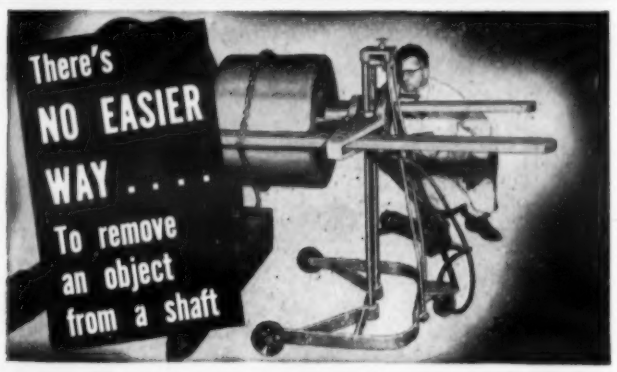
This is *real* economy! Lyon-Raymond Sheet & Strip Feeding Table not only saves time and work—it cuts operator fatigue. Foot pedal operated hydraulic lift does the job. Material is easily leveled with die face—then slid into position by hand. Applications for either horizontal or inclined bed presses equally simple.

WRITE: We have money-saving information for any punch press department. Ask for Bulletin 261, no obligation.

LYON-Raymond CORPORATION
Electric Power Trucks . . . Skid and Pallet Lifts
Hydraulic Elevating Equipment
Positioning . . . Sheet and Die Handling

4131 Madison St.
GREENE, N. Y.

For more details circle NED-9363 on enclosed inquiry slip



The New, Improved Hydraulic

PULLEY PULLER

Enables one man to remove a pulley, gear, pinion, or other object from a shaft in minutes! No crow bars, sledges, or blow torches. No damage. Puller is adjustable, easily moved, rugged. Hundreds now in use in industry.

5-ton size **$62.50**
★
20-ton size **$290.00**
★
50-ton size **$655.00**
(F.O.B. Factory)

Write for complete information — Catalog C

INDUSTRIAL ENGINEERING EQUIPMENT CO.
122-124 E. 4th St. Davenport, Iowa

For more details circle NED-9364 on enclosed inquiry slip

SHENANGO-PENN *Centrifugal* CASTINGS ... KEY TO SAVINGS

Extra life for symmetrical parts

This special bronze forming roll cover is typical. A Shenango-Penn *centrifugal* casting, it combines exceptional uniformity with fine, pressure-dense grain and freedom from common, often hidden defects such as sand inclusions and blow holes.

The result is greatly prolonged wear life plus extra strength to withstand abnormal loads, speeds and shock without risking costly failure in service.

Save time and money! If you need cylinders, sleeves, liners, rings, rolls or other symmetrical parts, ferrous or non-ferrous, large or small, rough or machined, try Shenango-Penn.

ASK FOR BULLETIN
No. 143—Centrifugal castings of non-ferrous metals and alloys.
No. 144—Centrifugal and static castings of plain and alloyed irons.
No. 145—Centrifugally cast bushing stock in all standard sizes.

SHENANGO-PENN MOLD COMPANY
883 West Third Street Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO PENN
All Bronzes • Monel Metal • Ni-Resist • Meehanite Metal

For more details circle NED-9365 on enclosed inquiry slip

New Literature and Catalogs

Electronic & Radio Equipment

Allied Radio Corp.—212-page illustrated 1951 catalog deals with complete line of radio, television and industrial electronic equipment. Special emphasis has been placed on equipment for industrial maintenance, research and production requirements. Covered are standard and special electronic tubes, test instruments, voltage stabilizers, transformers, resistors, condensers, relays, switches, rectifiers, tools, batteries, power supplies and other equipment.

For more details circle NED-9366 on enclosed inquiry slip

Jacketed Valves & Fittings

Hetherington & Berner Inc.—Automatically-operated jacketed valves, with or without automatic batching features, together with jacketed pumps, strainers and welded steel fittings, are described in bulletin J-50. Furnished for steam, air or hydraulic service, they are available in straight, three-way plug cock or straight globe types.

For more details circle NED-9367 on enclosed inquiry slip

Pressure Blowers

Moore Co.—20-page illustrated bulletin TMC-171 is descriptive of class 2000 axial flow pressure blowers designed for use on cooling towers having both forced and induced draft as well as in all types of duct installations where large quantities of air are required under static pressures up to 4 in. of water.

For more details circle NED-9368 on enclosed inquiry slip

Cast Brass Parts & Assemblies

Central Brass Mfg. Co.—4-page illustrated bulletin "Experience for Sale" shows representative standard and custom-built assemblies and parts which are produced for manufacturers by this company. Available facilities include brass foundry, tool and pattern shop, turret lathes, automatic chucking machines, machine tools, polishing and plating equipment and assembly department.

For more details circle NED-9369 on enclosed inquiry slip

Industrial Temperature Control

Partlow Corp.—24-page illustrated bulletin No. 101 "The Design and Process Engineer's Guide to Industrial Temperature Measurement and Control" defines different types of control systems and distinguishes between them so that particular type best suited to situation can be selected.

For more details circle NED-9370 on enclosed inquiry slip

Floor Maintenance Products

Multi-Clean Products, Inc.—Illustrated reference manuals contain detailed instructions for proper care of wooden, asphalt tile, terrazzo, rubber tile, concrete and linoleum floors. Correct types of floors to suit various conditions are classified.

For more details circle NED-9371 on enclosed inquiry slip

Power Presses

Sales Service Machine Tool Co.—8-page illustrated bulletin P650 offers technical data on line of Press-Rite open-back inclinable power presses in 5 to 85-ton models. Flywheel and back-geared machines are offered in largest size.

For more details circle NED-9372 on enclosed inquiry slip

More AIR or VACUUM in LESS SPACE!

MOTOAIR* PUMP

Provides accessory power for paper-handling, lifting and conveying light sheets, etc.

Used for many other HEAVIER jobs, such as sumps, blowers, vacuum frames, packaging, evacuating air or liquids, etc.

COMPACT! Scarcely larger than a motor, and built integral to its own power! Self-lubricating, and designed to operate without BELTS, GEARS, EXTENDED DRIVES or HINGED BLADES built to compensate for its own wear!

Write for Details!
*Reg. U. S. Pat Off. 810

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles

For more details circle NED-9373 on enclosed inquiry slip

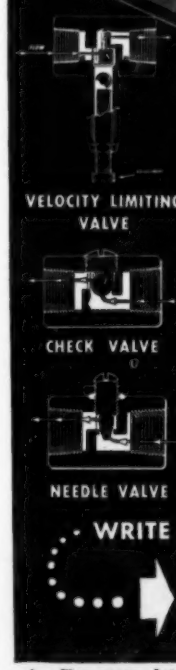
PEERLESS PACKET
Spur Geared Hoist

. . . a really good hoist with long life performance at low cost. Extreme light weight is combined with steel for strength and safety. 1 ton is 40 pounds and 2 ton is 120 pounds lighter than old style hoists. Enclosed steel construction guards against damage and keeps out dirt . . . prelubricated ball bearings throughout, simplified gearing and improved friction mechanism assure extremely high operating efficiency. Write for Bulletin P-5.

MAKERS OF HOISTS SINCE 1876
THE HARRINGTON COMPANY
17TH AND CALLOWHILL STREETS
PHILADELPHIA 30, PA.

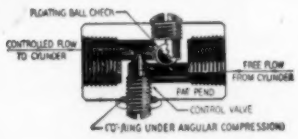
For more details circle NED-9374 on enclosed inquiry slip

FLOW CONTROL VALVE for Cylinder Speed ADJUSTMENTS over a WIDE RANGE IN AIR OR HYDRAULIC USE



The Pneu-Trol Flow Control Valve combines an efficient Stainless Steel FLOATING BALL CHECK which opens and closes at the slightest change in flow direction, with a Vernier Type VARIABLE NEEDLE ORIFICE adjustment in a compact control which has widened air and hydraulic cylinder application by providing precise control of cylinder action. Modifications of the Pneu-Trol Valve are available as Plain Check, Check with Fixed Orifice (orifice drilled by customer in the Standard Check Valve), Needle Valve and Velocity Limiting Check, as illustrated at left. All Pneu-Trol Valves are made from bar stock in brass (up to 1000 psi) or steel (5000 psi) or other body metals to your specifications. All internal parts are Stainless. All valves available in 5 sizes—1/8", 1/4", 3/8", 1/2", and 3/4".

Attractive prices—immediate delivery. Write for illustrated circular and price list.



Pneu-Trol Devices, Inc.
1432 N. Keating Ave., Chicago, Ill.

For more details circle NED-9375 on enclosed inquiry slip

Over Half of America's Top Companies Use "Speed Sweep"

THE BRUSH WITH THE STEEL BACK

BECAUSE it sweeps faster and cleaner, and outlasts ordinary brushes 3 to 1, Speed Sweep has become the No. 1 sweeping tool of American Industry — used by over 50,000 firms. Whether you use a few or a lot of brushes, you'll find it pays to switch to Speed Sweep.

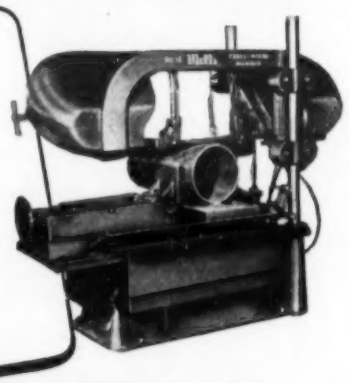
Write for styles, sizes and prices.

MILWAUKEE DUSTLESS BRUSH CO.
MILWAUKEE 3, WISCONSIN

For more details circle NED-9376 on enclosed inquiry slip

BIG JOBS or little jobs

Handle them speedily, economically on a WELLS No. 12 METAL CUTTING BAND SAW!



The Wells No. 12 Saw is a sturdy production tool for fast and accurate cutting at a minimum cost. It doesn't require an expert to operate this machine. Just place the stock in the quick-acting vise and push the starting buttons — the hydraulic head descends automatically, feeding the blade into the stock at a uniform rate, governed by electrically controlled, adjustable blade pressure. At the completion of the cut the head returns to a predetermined raised position and the motors shut off.

GET FULL DETAILS FROM YOUR WELLS DEALER

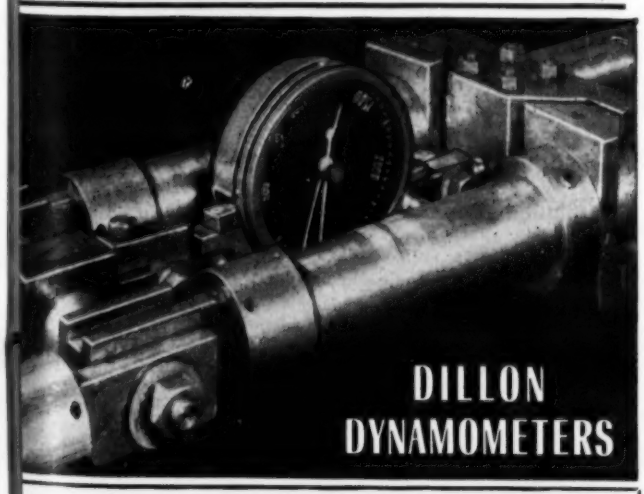
Wells SAWS

Products by Wells are Practical

METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION
1313 HARDING ST., THREE RIVERS, MICHIGAN

For more details circle NED-9377 on enclosed inquiry slip



FOR VERSATILE TENSION MEASURING

Above view shows DILLON DYNAMOMETER hooked into mechanical assembly to indicate exact amount of friction encountered by packing in hydraulic cylinders. Just one of scores of uses for this handy instrument.

COMPACT—ACCURATE

Measures only 8¼"x6¼"x3"—weighs 8 lbs. 4 oz. Has Maximum hand. Thousands in use—capacities up to 20,000 lbs. Not injured by overload, easy to use. Priced *low*—good delivery.

W. C. DILLON & COMPANY, INC.
1421NE South Circle Ave.
Forest Park, Illinois

For more details circle NED-9378 on enclosed inquiry slip

New Literature—Continued

Centrifuges

Sharples Corp.—Tubular bowl and disk type centrifuges, together with horizontal bowl decanter type and crystal dehydrator are summarized and depicted in 4-page illustrated bulletin 1259. Units have prime application in separation and clarification of liquids and removal, recovery and classification of solids.

For more details circle NED-9379 on enclosed inquiry slip

Flexible Metal Hose

Atlantic Metal Hose Co.—Illustrated catalog 500 presents complete engineering and application data in compartmentalized form on flexible metal interlocking high pressure hose, air jacketed hose for diesel exhausts and conveyor hose for ventilating and exhausting. Second section refers to seamless flexible metal hose for high pressures, and third section deals with gasoline-handling hose.

For more details circle NED-9380 on enclosed inquiry slip

Material Handling Bins

Tote System, Inc.—Two 4-page illustrated folders explain use of Tote Bins in handling all types of products. These aluminum alloy bins are weatherproof, waterproof and seal tightly. Easily transported by fork trucks, bins become hoppers when placed in position on manual or hydraulically actuated tilt rack for emptying.

For more details circle NED-9381 on enclosed inquiry slip

Power Hack Saws

Miller-Knuth Mfg. Co.—Features and capacities of portable and bench model portable Sawmaster power hack saws are given in two illustrated bulletins. Models are available for making straight cuts in up to 6 x 7-in. stock.

For more details circle NED-9382 on enclosed inquiry slip

Torque Tools & Testers

Richmont, Inc.—16-page illustrated catalog "Proper Torque" details and lists prices of Chapman torque calibrator; Livermont analyzer; flare nut, square drive, box head open end and hose clamp Torq-Stop torque wrenches; and adjustable Roto-Torq Livermont torque screwdriver which takes Phillips, Reed & Prince and slotted tips.

For more details circle NED-9383 on enclosed inquiry slip

Textile Ticketing Equipment

Soabar Co.—Details of Thermaply shade labeling, pin shade ticketing, sew shade ticketing and fiber content ticket printing machines as well as available clothing and garment tickets are described in 6-page illustrated folder "Soabar Machines." Pin, neckband, size and ring-seal tickets; gummed and self-sticking labels and other means for marking textiles and finished products are covered in 8-page folder.

For more details circle NED-9384 on enclosed inquiry slip

Liquid Level Controls

Charles F. Warrick Co.—32-page illustrated catalog FA is entitled "Floatless Liquid Level Controls". Principle of operation, standard types, alarm and signal combinations, controls and application diagrams of these electrode type units are covered.

For more details circle NED-9385 on enclosed inquiry slip

THIS SQUIRT LOOSENS-

FROZEN BOLTS.. BEARINGS

It's fast and accurate—shoots 15 feet—a drop or a squirt. It's labeled Kroil—so you can grab it quickly when a frozen bolt, screw or bearing starts to cost expensive time or threaten production.

That is when Kroil creeps into millionth inch spaces to soften rust, dissolve gum and supply lubrication to loosen the parts. It's fast and it's positive.

"Kano Kroil always opens up the tight fitting covers on fire extinguishers for us. It is truly a wonderful preparation. We have found such covers we could not force off with a blow of a hammer. Several minutes' seepage of Kroil did the trick," so says a service organization for fire extinguishers.

Kroilers are priced at $1.50 each and are well worth it. As an inducement to try Kroil we offer the combination of one Kroiler and one gallon of Kroil—(listed at $3.50) for $4.75, f.o.b. factory.

If you are not one of the 8,500 industrial plants already using Kroil, send for a gallon on the proposition that it will loosen the most stubborn frozen part or you get your money back.

KANO LABORATORIES 1074 THOMPSON LANE NASHVILLE 11, TENN.

For more details circle NED-9386 on enclosed inquiry slip

Courtesy Ideal Models Co., Detroit, Mich.

for Model Kitchens!

Six versatile De-Sta-Co Toggle Clamps save in this simple, economical, plastics cementing fixture. The turntable more than doubles production . . . eliminates the cementing cycle "bottleneck."

These perfect reproductions are for a manufacturer of metal kitchens. This operation, cementing on tops, requires: Fast cementing cycle—positive clamping pressure for a perfect bond—precise alignment for accurate assembly.

De-Sta-Co No. 225-U fills these requirements. *Completely retractable* when opened for quick insertion and removal of work, it offers the rapid toggle action, positive holding pressure and accurate performance that make De-Sta-Co Toggle Clamps *ideal* "Model Tooling".

For your working-holding problems in Assembly, Welding, Bonding, Machining, Inspection . . . of any materials . . . tool up with these economical, efficient, high-production examples of "Model Tooling".

De-Sta-Co Toggle Clamp Catalog describes more than forty stationary and portable clamps. Write for your free copy today.

DETROIT STAMPING CO.

360 Midland Ave. • • Detroit 3, Mich.

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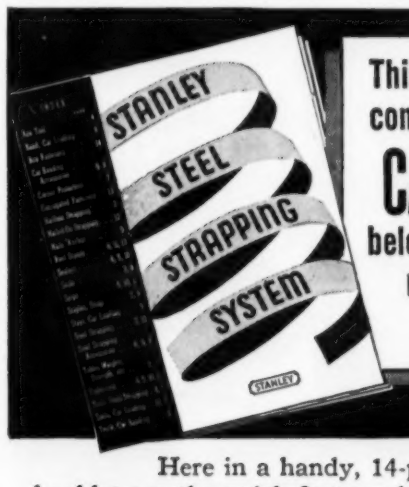

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Thru Bins, Hoppers
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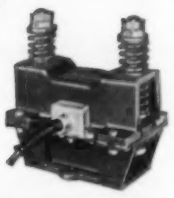

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For more details circle NED-9400 on enclosed inquiry slip

New Literature—Continued

Sales Administration Systems

Remington Rand Inc.—"How To Increase Profitable Sales" is title of 26-page illustrated booklet that details how machines and systems can be utilized to compile sales analysis facts and utilizes them for checking sales by individual accounts, prospects, salesmen and territory.

For more details circle NED-9401 on enclosed inquiry slip

Fuse Links

W. N. Matthews Corp.—Various types of primary universal fuse links having all types of time-current characteristics to suit individual needs are illustrated and described in 16-page bulletin No. 104-B which also shows Slofast links that have delayed time-current characteristics not obtainable in conventional links.

For more details circle NED-9402 on enclosed inquiry slip

Air Relief Traps

Armstrong Machine Works—Ball float traps for venting air from any liquid under pressure are described in 2-page illustrated bulletin No. 206. Typical applications for traps include venting air from hot water heating systems, water service lines, centrifugal pumps and dry cleaning solvent filters.

For more details circle NED-9403 on enclosed inquiry slip

Eddy-Current Couplings

Dynamatic Corp.—16-page illustrated form No. WC-1 is descriptive of water-cooled electromagnetic eddy-current couplings for use in adjustable speed drives employing alternating current as power source. Basic principles, operating characteristics and typical applications are covered also.

For more details circle NED-9404 on enclosed inquiry slip

Tungsten & Molybdenum

Fansteel Metallurgical Corp.—24-page illustrated booklet form F-1019 on tungsten and molybdenum covers metallurgy; physical, mechanical and chemical properties; uses and applications; fabricating techniques; and available forms.

For more details circle NED-9405 on enclosed inquiry slip

Plastic Extrusions

Anchor Plastics Co.—"Extruded Plastics" is 8-page illustrated brochure that explains many forms of plastic extrusions and presents sketches of components fabricated for wide variety of industrial and consumer products.

For more details circle NED-9406 on enclosed inquiry slip

Hydraulic Power Units

Logansport Machine Co.—Dimensions, performance data and mechanical and operating features of compact hydraulic power units which combine motor, pump, safety valve, pressure regulator and reservoir are given in 4-page illustrated catalog 200 section 1.

For more details circle NED-9407 on enclosed inquiry slip

Research Facilities

Cook Electric Co., Cook Research Laboratories Div.—48-page illustrated brochure describes services, facilities and personnel of laboratories available to government agencies and private industry on contract basis.

For more details circle NED-9408 on enclosed inquiry slip

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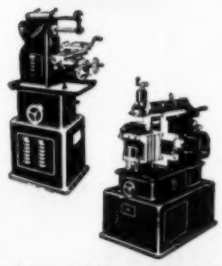

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For more details circle NED-9410 on enclosed inquiry slip

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Cameron
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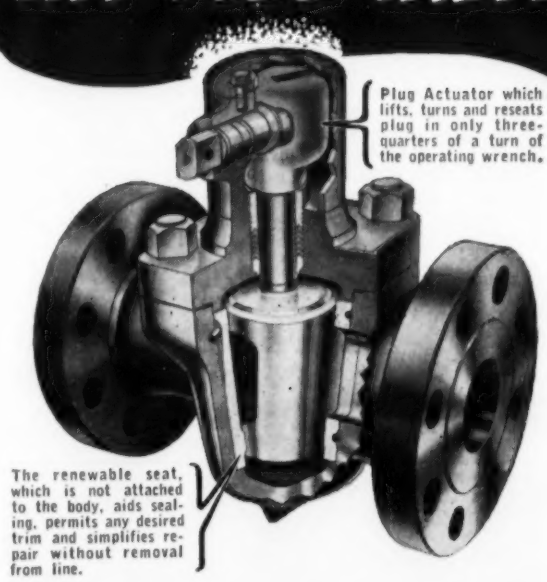

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For more details circle NED-9414 on enclosed inquiry slip

New Literature—Continued

Hydraulic Cylinders

Hanna Engineering Works—28-page illustrated catalog No. 233-A lists specifications, design features, construction and operation of line of high pressure hydraulic cylinders. Units for every mounting requirement are depicted for applications requiring controlled push, pull, lift, press or clamp motions. Pressures range to 1500 psi.

For more details circle NED-9415 on enclosed inquiry slip

Current Relays

Westinghouse Electric Corp.—Type D-3 relay for service in direct current circuits to furnish protection against overcurrent, undercurrent and reverse current and type DT-3 relay for protection of transformers and alternating or direct current motors and generators from damage resulting from high temperatures are described in 4-page bulletin No. 41-260.

For more details circle NED-9416 on enclosed inquiry slip

Synthetic Rubber Insulation

Western Insulated Wire Co.—"Applications of Neoprene and Cold Rubber in Electrical Cable" by Carl E. Huxley is 2-page article in which cold rubber as an insulating material and Neoprene as jacketing material for electric cords and cables are discussed and compared with other polymers.

For more details circle NED-9417 on enclosed inquiry slip

Numbering Machines

Roberts Numbering Machine Co.—Illustrated catalog No. 50 lists hand numbering and dating machines as well as Rapidprint line of time, number and date machines. Rapidprint section shows facsimile imprints of various automatic electric machines and various accessories including ribbons, motors and die plates.

For more details circle NED-9418 on enclosed inquiry slip

Electric Viscometer

Brookfield Engineering Laboratories, Inc.—How viscosity can be tested, studied and controlled with Synchro-Lectric viscometer is explained in 6-page illustrated pocket-size booklet. Models are available for measuring materials having viscosities from less than 1 to 32 million centipoises.

For more details circle NED-9419 on enclosed inquiry slip

Protective Coatings

Bridges Paving Co., Bitucote Products Div.—Characteristics, uses and applications of general-purpose emulsified asphalt protective coating for wide variety of structures are listed in 2-page illustrated bulletin. Shown are eight actual cases where compound's resistance to acids, fumes, alkalies and actinic rays of sun were prime consideration.

For more details circle NED-9420 on enclosed inquiry slip

Production Grinding

Blanchard Machine Co.—83-page illustrated book "Work Done on the Blanchard" presents information on surface grinding of all types of metal, glass and ceramic parts. Photographs and line drawings show correct grinding techniques, chucking methods, holding fixtures and other procedures.

For more details circle NED-9421 on enclosed inquiry slip

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- ✓ Smooth, Vibrationless Fluid Drive
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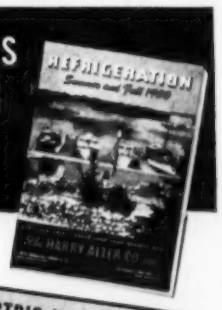

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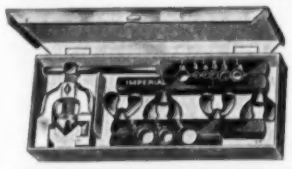

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LOW COST—Convoy Nesting Tote Box costs 50% to 60% less than steel . . . so inexpensive that they can be discarded when they finally become unserviceable.

More than 30 stock sizes of nesting boxes available now . . . write for details.

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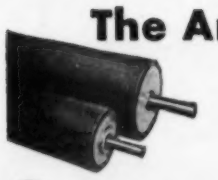

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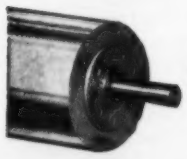

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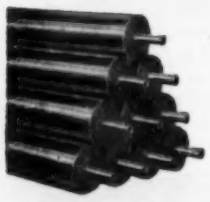

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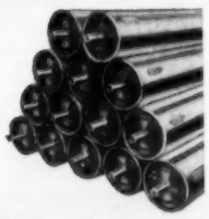

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For more details circle NED-9428 on enclosed inquiry slip

New Literature—Continued

Worm Gear Drives

Link-Belt Co.—80-page illustrated book No. 2324 deals with worm gear drives available in ten different sizes for fractional or larger horsepower and in speed ratios of 3⅝:1 up to 8000:1. Typical drive problems and their solutions are dealt with.

For more details circle NED-9429 on enclosed inquiry slip

Pressure & Temperature Regulators

Spence Engineering Co.—Useful data regarding pilot-operated pressure and temperature regulators are presented in 32-page illustrated condensed catalog No. 350. Discussed are main valves, controls and strainers together with capacity and flow data.

For more details circle NED-9430 on enclosed inquiry slip

Cutting & Welding Apparatus

Alexander Milburn, Inc.—Containing complete cross-reference of part numbers to aid replacement, this catalog presents entire line of oxyacetylene cutting and welding apparatus; regulators for oxygen, acetylene and other gases; accessories and other supplies; and portable carbide lights.

For more details circle NED-9431 on enclosed inquiry slip

Locker Room Design

Penn Metal Corp. of Pa.—Effects of modern locker room design on management-labor relations is reported in 4-page illustrated folder No. SE-1. Typical 'Penco-conditioned' locker rooms are depicted and equipment for furnishing them is described.

For more details circle NED-9432 on enclosed inquiry slip

Heavy-Duty Connectors

Cannon Electric Development Co.—12-page illustrated bulletin M2-1950 is descriptive of type M electric connectors adapted to variety of uses on motors as well as on power, heavy-duty signal and control circuits. Type M1 fittings are rated at 250 v dc and 600 v ac and are approved by Underwriters' Laboratories.

For more details circle NED-9433 on enclosed inquiry slip

pH Electrodes

Leeds & Northrup Co.—24-page illustrated catalog EN-S5 presents complete line of pH electrodes and assemblies for both industrial and laboratory applications and lists advantages of each type of electrode for specific uses.

For more details circle NED-9434 on enclosed inquiry slip

Close-Coupled Pump

Allis-Chalmers Mfg. Co.—6-page illustrated bulletin 52B6140B outlines design and construction features of Electrifugal close-coupled pump and motor. Pumps are available in ratings from 10 to 500 gpm at heads to 220 ft. Motors are rated from ¾ to 10 hp.

For more details circle NED-9435 on enclosed inquiry slip

Conveyors

Anchor Steel & Conveyor Co.—60-page illustrated brochure depicts over 50 different types of conveyor applications and includes sections on types for small parts, scrap and chip handling. Covered also are automatic overload cut-outs for pulley or direct power drives.

For more details circle NED-9436 on enclosed inquiry slip

Direct-Current Motors & Generators

Miehle Printing Press & Mfg. Co., Star-Kimble Motor Div.—Construction, operation and application data on direct-current motors and generators are presented in 4-page illustrated bulletin B1001. Ball-bearing units are available in range from ½ to 200 hp and 1 to 150 kw.

For more details circle NED-9437 on enclosed inquiry slip

Keyseaters

Mitts & Merrill—12-page illustrated catalog 750 outlines features of Giant keyseater which is designed to cut internal keyways or grooves of any desired size or shape in bores of pulleys, gears, flywheels or other machine parts requiring fixation on rotating shaft.

For more details circle NED-9438 on enclosed inquiry slip

Hydraulic Valves

Rivett Lathe & Grinder, Inc.—52-page illustrated catalog section 202 depicts and describes 90 different models of four-way hydraulic valves. Suitable for pressures to 1500 psi, valves are available in sizes from ¼ to 1½ in. with standard, spring return, spring centered or ball detent action.

For more details circle NED-9439 on enclosed inquiry slip

Solenoid Operated Valves

Automatic Switch Co.—72-page illustrated valve catalog No. 23 descibes extensive line of solenoid operated valves for controlling flow of liquids and gases. Included are flow charts for water, air, gas and steam as well as complete data on various styles of valves. Auxiliaries such as filters and strainers are covered.

For more details circle NED-9440 on enclosed inquiry slip

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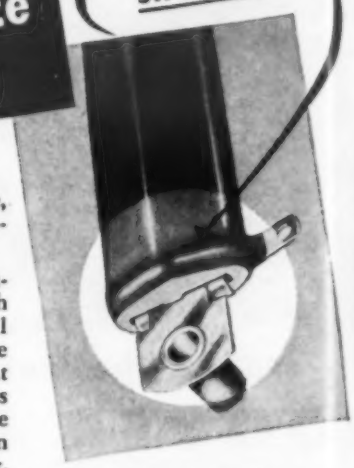
and extra strength



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Elliptical shape increases strength against mechanical strain . . . gives more surface for faster heat dissipation . . . enables wire to *hug* the core shape for more even and uniform winding.

Combination of low mounting brackets and technical arrangement facilitates multiple stacking.

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- Dependable, trouble-free performance offers lowest cost per gallon of liquids moved.

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with multiple protection for . . .

Dulac Clear Universal Lacquer #462

• Here's an M&W finish that permits accurate retention of all desirable surface qualities of most metals . . . that adds lasting protection against heat, cold, weather, corrosion, stain and perspiration — Dulac Clear Universal Lacquer #462. It's formulated to give good adhesion with either the spray, dip or brush method. And it fits into fast production schedules because in five to ten minutes this successful general purpose lacquer dries out of dust . . . hardens in one hour. For complete information, write for Technical Data Bulletin 110 or let an M&W technical consultant discuss your requirements privately with you.

PIONEERS IN PROTECTION M&W Co 1876 . . . *where industry goes with finishing problems*

MAAS & WALDSTEIN COMPANY

Newark 4, N. J. • Chicago 12, Ill. • Los Angeles 34, Calif.

Pacific Coast Division: SMITH-DAVIS CO., 10751 Venice Boulevard, Los Angeles 34

MANUFACTURERS OF INDUSTRIAL FINISHES

For more details circle NED-9443 on enclosed inquiry slip

EXCLUSIVE "Auto-grip" AUTOMATIC CHUCK

View at left shows the No. 502 "Pipe Master" equipped with the new "AUTO-GRIP" automatic chuck.

"AUTO-GRIP" takes over all the muscle-work of chucking pipe. The operator spins the handwheel until the chuck jaws strike the pipe. Then he starts the machine. The chuck's jaws take hold instantly.

The TOUGHER the pull—the TIGHTER the grip. *It's all grip and no slip with "AUTO-GRIP".*

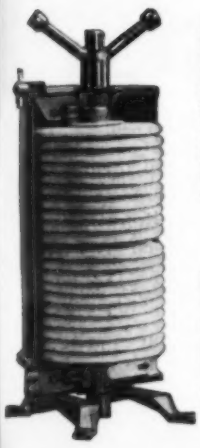
This EXCLUSIVE Oster feature is now standard equipment on all Oster 2" pipe machines that revolve the work. Threading speeds of these machines PLUS the new, automatic chucking speed of the AUTO-GRIP reduce pipe threading costs to new lows with machines of this class. Write for complete details NOW!

OSTER

THE OSTER MANUFACTURING CO.
2066 EAST 61ST STREET
CLEVELAND 3, OHIO, U. S. A.

For more details circle NED-9444 on enclosed inquiry slip

Here's Positive Filtration for lubricating, hydraulic and fuel oils, solvents, and other industrial fluids



Alsop "Disc-Pak" Filters completely remove all undesirable solids, minute particles, sludge and moisture. The long-life, replaceable cartridge type elements contain an enormous filtration area and are available in eight different grades for varying degrees of filtration from course, fast-flowing to the removal of particles in the sub-micron stage. "Disc-Pak" Filters are made in a full range of sizes and capacities up to 3600 g.p.h.

Send for This Free Catalogue

For complete information, write Alsop Engineering Corp., 512 East Rd., Milldale, Conn.

ALSOP ENGINEERING CORPORATION
Filters, Filter Discs, Pumps, Tanks, Mixers, Agitators

For more details circle NED-9445 on enclosed inquiry slip

GOOD.....FOR ALL PRESSURES

Yarway Impulse Steam Traps are suitable for any pressure up to specified maximum *without change of valve or seat.* Types available up to 1500 lbs. Simplifies installation and maintenance. Over 650,000 Yarway Traps already *proved on the job.* Sold by over 200 distributors. Bulletin T—1740 free.

YARNALL-WARING CO. 131 MERMAID AVENUE, PHILA. 18, PA.

For more details circle NED-9446 on enclosed inquiry slip

New Literature—Continued

Miniature Speed Changers

Metron Instrument Co.—Fixed-ratio type miniature speed changers in three different series for different applications are described in 4-page illustrated bulletin No. 100. Standard ratios range from 10:9 to 531,440:1.

For more details circle NED-9447 on enclosed inquiry slip

Fluid Pressure Boosters

Miller Motor Co.—12-page illustrated bulletin B-200 explains applications of fluid pressure boosters in clamping, punching, shearing, stamping, crimping, welding, pressing and similar operations accomplished by compressed air or hydraulic power.

For more details circle NED-9448 on enclosed inquiry slip

Cabinet Bench

Standard Pressed Steel Co.—Hallowell cabinet bench which features all-steel construction, ample storage space, standardized units and interchangeable accessories is described in bulletin No. 702.

For more details circle NED-9449 on enclosed inquiry slip

Agitating & Mixing Equipment

Patterson Foundry & Machine Co.—32-page illustrated catalog 505 precents Typhoon portable power mixers, agitator-mixer assemblies and drive, outside-packed side-entering agitators, acid-resistant Porox linings for mixers and processing tanks and other related equipment.

For more details circle NED-9450 on enclosed inquiry slip

Cut-Out Device

Anchor Steel & Conveyor Co.—12-page illustrated catalog 50A features automatic cut-out pulleys and couplings which instantly shut off motor when overload occurs and reset automatically. Units are dynamically balanced for speeds up to 2400 rpm.

For more details circle NED-9451 on enclosed inquiry slip

Gear Motors & Drives

Link-Belt Co.—16-page illustrated book No. 2247 is entitled "Link-Belt Gearmotors, Motogears and Helical Gear Drives". Features of drives, methods of selection, load classifications, overhung loads, dimensions and other data are listed and tabulated. 12-page price list A-1404 supplements this book.

For more details circle NED-9452 on enclosed inquiry slip

Roller Levelers

McKay Machine Co.—20-page illustrated bulletin 100 outlines different types and sizes of roller levelers for straightening flat rolled products made in rolling mills. Worm drive, separately adjusted, universal and inverted levelers are described.

For more details circle NED-9453 on enclosed inquiry slip

Self-Locking Nuts

Boots Aircraft Nut Corp.—24-page illustrated general catalog "Boots" covers line of hexagon and anchor nuts as well as floating anchor and channel assemblies. Sizes, dimensions, materials, heat ranges and other application data are given on these fastenings. Features of Hex-Lok, Plate-Lok, Rol-Top, Bellows and wing style nuts are explained.

For more details circle NED-9454 on enclosed inquiry slip

Counts to 10,000 Turns per Minute

Clipper Coil Winding COUNTER
also ideal for other high speed Revolution Counting

Brings counter *close to coil* for *precision winding at high speed.* Subtracts turns removed. Quick, one-motion reset. Gears hobbed on own shafts. Extremely long life. Many other features. Prompt shipment. Thousands in use. Send for Catalog or order sample on approval.

Production Instrument Company
700-12 W. JACKSON BLVD., CHICAGO 6, ILL.
Representatives in Principal Cities

For more details circle NED-9455 on enclosed inquiry slip

Why ALCO-LITE Type 400 is the right ladder for you

The Design is Right

Ample standing room on the 14" by 17" platform. Compact, folding design makes it easy to handle and store. Available in even heights from 4' to 12'.

The Strength is Right

Constructed from strong 61ST Aluminum Alloy, heavily riveted throughout. Supports heavy loads for years without deteriorating.

The Weight is Right

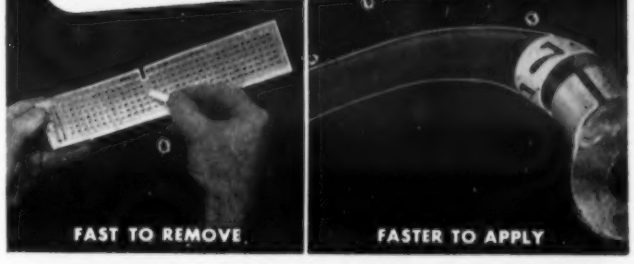
Weighs less than 5 lb. per ft. (12-ft. ladder weighs 56 lbs.). Quickly and easily moved about without worker strain.

The ALCO-LITE Type 400 is the *right* folding platform ladder for you if you want safety, convenience, and durability. Write for complete information describing nine types of ALCO-LITE aluminum industrial ladders.

ALCO-LITE ALUMINUM LADDERS
ALUMINUM LADDER COMPANY
346 CARBIS STREET • WORTHINGTON, PA.

For more details circle NED-9456 on enclosed inquiry slip

COMPARE E-Z CODE SPEED*



with any other wire marker or method

Just select the marker you want, pull the unique die-cut Speed Tab and the fabric marker is off! Remaining strips are still protected.

E-Z Code Markers are instantly applied *without moistening.* Stick permanently, even when pulled through conduit. Waterproof, weatherproof. Positive identification for wire, pipe, cable, conduit, terminals, parts, etc. Preprinted in 550 standard codes (including ASA and NEMA) or to your specifications.

*or ECONOMY or VISIBILITY or SIMPLICITY

Make an on-the-job E-Z Code test

WESTERN LITHOGRAPH CO., Dept. NED12
E. SECOND ST., LOS ANGELES 54, CALIF.

For more details circle NED-9457 on enclosed inquiry slip

NOW...even greater PROTECTION!

BS&B Combination Pressure-Vacuum VENT VALVE *plus* FLAME ARRESTOR

Prevent flame propagation into your atmospheric storage tanks. Now the famous BS&B VVH Pressure-Vacuum Vent Valve has been combined with an arrestor bank. Its network of capillary openings offer efficient heat radiation... prevent touching off vapors and fluids. Functions efficiently at highest temperatures. Vent valve protects against both overpressures and vacuum.

Will Not Freeze Shut!

Rubber to metal seating. Easily cleaned. Tight. Consult your insurance man about credit toward lower premiums. Write for literature.

BLACK, SIVALLS & BRYSON, Inc.
Section 1-85-12FA
7500 E. 12th St. Kansas City 3, Mo.

VVH Pressure-Vacuum Vent Valve-Flame Arrestor

Size Inches	Opening Pressures, Ozs. Minimum	Opening Pressures, Ozs. Maximum	Vacuum Openings* Ozs.
2	0.5	1.75	0.5
3	0.5	1.75	0.5
4	0.5	1.75	0.5
6	0.5	1.75	0.5

NOTE: Pressures in these tables are for cast aluminum cover only. Pressure ratings require a manufacturing tolerance of plus or minus 5 per cent.

For more details circle NED-9458 on enclosed inquiry slip

A Convenient, Low Cost Portable
ELECTRIC BAKING DRYING OVEN

Just What You Need for Touch-Up, Complete Refinishing, De-Hydrating, Baking Industrial Finishes.

Here Are A Few of Its Features

- Plugs into any 110-V AC convenient outlet; no special wiring required.
- Fan driven forced circulation moves large quantities of air through oven, assuring uniform temperature and taking off moisture.
- Costs less than 5 cents per hour to operate; uses approximately 1 KW of electricity.
- Sensitive thermometer—which can be read from outside—is available for accurate temperature control; heats up quickly.
- Strong, sturdy construction.
- Two models, with maximum temperatures of 225° and 325°—higher temperatures special order.
- Proved on thousands of jobs.

Write for Full Details

$69.50 And Up, FOB Chicago

GRIEVE-HENDRY COMPANY
1101 N. Paulina, Chicago 22, Ill.

For more details circle NED-9460 on enclosed inquiry slip

Devoted exclusively to
GEAR, SPROCKET & RACK CUTTING

There are no side lines with us—our entire shop is set up for the production of Gears, Sprockets, Racks, Splines or any special design gears.

We also produce Steel Mill Type Gears with case-hardened teeth for longer life.

Send for Bulletin No. 150 and a "Pictorial Trip Through Our Plant"

INDUSTRIAL GEAR MFG. CO.
4541 VAN BUREN STREET CHICAGO 24, ILLINOIS

For more details circle NED-9461 on enclosed inquiry slip

HANDLING SMALL PARTS?

POWELL Job-Designed Hopper Boxes cost no more, Slash handling time 40-50%

If you are handling small parts in volume you cannot afford to overlook this great new line of Hopper Boxes. No auxiliary stands or frame supports required . . . eliminates fatigue factor . . . speeds production . . . ideal for production assembly or machine work . . . can be tiered to any desired height . . . cuts storage space . . . speeds inventory. Let Powell design and build a hopper box best suited to your particular needs.

Powell representatives in principal cities

POWELL PRESSED STEEL CO. • HUBBARD, OHIO
ORIGINATORS OF COLD FORMED ALL STEEL HANDLING EQUIPMENT
In Greater Youngstown · Dept. 512

For more details circle NED-9462 on enclosed inquiry slip

New Literature—Continued

Casters & Trucks

Rapids-Standard Co.—36-page illustrated catalog CT-50 and supplemental price list present details of line of industrial casters, platform trucks and hand trucks along with specifications and tips on choice of models best suited to various materials handling problems.

For more details circle NED-9463 on enclosed inquiry slip

Floor Maintenance

S. C. Johnson & Son, Inc.—20-page illustrated brochure Adv. 860 contains step-by-step instructions for normal maintenance of practically any type floor or floor covering and includes pictorial presentation on correct ways to remedy 16 types of floor problems.

For more details circle NED-9464 on enclosed inquiry slip

Electronic Parts

Radio Shack Corp.—172-page illustrated 1951 catalog of electronic parts, equipment and complete kits contains sections on test and service equipment, public address systems, tubes, transformers, connectors, wire and cable, condensers, resistors, batteries and books.

For more details circle NED-9465 on enclosed inquiry slip

Dew Point Indicator

Illinois Testing Laboratories, Inc.—Alnor Dewpointer for simple and accurate determination of dew points, water vapor density, water vapor pressure and per cent water vapor by volume is featured in 6-page illustrated bulletin No. 2051.

For more details circle NED-9466 on enclosed inquiry slip

Recessing Tools

Maxwell Co.—Illustrated manual DB explains use of recessing tools for internal forming operations on automatic machines such as back-chamfering, back-counterboring, recessing and thread and grinding reliefs. Standard feed ratio of tools is 1:3 so that forming processes can be synchronized with other automatic operations.

For more details circle NED-9467 on enclosed inquiry slip

Dry Type Transformer

R. E. Uptegraff Mfg. Co.—12-page illustrated bulletin No. 126 is descriptive of line of dry type transformers including open coil and completely enclosed styles, unit substations and core and coil units. Sizes range from 0.1 to 2000 kva.

For more details circle NED-9468 on enclosed inquiry slip

Roller Tube Expander

A. L. Henderer's Sons—Type FC roller tube expander that features adjustable ball bearing thrust collar to reduce scoring and friction on tube end produced by thrust of expander is described in 4-page illustrated bulletin No. 80. It has been standardized for automatically controlled driving units but can be driven by other means.

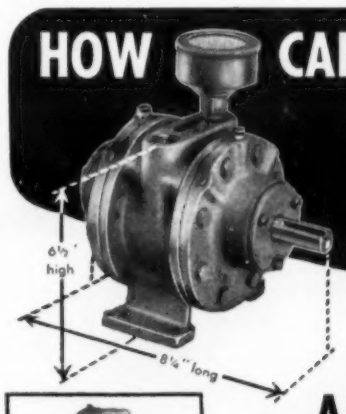
For more details circle NED-9469 on enclosed inquiry slip

Miniature Control Motors

Transicoil Corp.—Illustrated 16 x 22-in. chart provides convenient reference source of data necessary for specifying miniature control motors of 25 different types. Speed-torque curves and operating characteristics are given also.

For more details circle NED-9470 on enclosed inquiry slip

HOW CAN YOU USE this GAST 3 h.p. ROTARY AIR MOTOR?



This style for flange mounting.

SEE OUR CATALOG in SWEET'S FILE for PRODUCT DESIGNERS

"AIR MAY BE YOUR ANSWER!"

On your present products — or those now being designed — you may gain outstanding advantages by using this *larger* GAST No. 8 Air Motor.

Built on the famous GAST rotary-vane principle, the No. 8 delivers variable-speed power with simple valve control. It's explosion proof . . . it can't burn out from overloads . . . and it delivers a smooth 3 h.p. at 1500 r.p.m. *with a weight of only 25 pounds!*

Investigate this unique, compact motor now — it may provide unusual advantages for your application.

Write for new bulletin AM-8 and complete specifications — today!

GAST ROTARY AIR MOTORS • COMPRESSORS • VACUUM PUMPS
(To 3 H.P.) (To 30 Lbs.) (To 28 Inches)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

For more details circle NED-9471 on enclosed inquiry slip

NEW TYPE CI ADJUSTABLE THERMOSTAT

The new Type CI Adjustable Indicating Thermostat is a precise temperature control for gas, liquid, and metal-to-metal applications, such as ovens, hot plate presses, water baths, incubators, proofing cabinets and cold cabinets. It is most useful on units where periodic checks of temperature are required, advisable, or will prove time-saving. The new Type CI is simply and ruggedly built, employing the highly sensitive response action of a solidly liquid-filled bulb and bellows assembly to a snap-acting switch and indicating pointer. The thermostat is adjustable over its entire range by a knurled thumbscrew on the front of the case.

SPECIFICATIONS:
Case 5½ x 5½ x 1¾"; Wt. 3 lbs. Standard ranges 50°—350°F and 50°—600°F, special ranges may be had between —120°F and +600°F. Standard differentials ½°F in circulating liquid, 2°F in air. Switch ratings 10 amp 125 V AC and 5 amp 250 V AC. Write for new bulletin No. 4816T which gives full details.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street
Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

For more details circle NED-9472 on enclosed inquiry slip

More Threaded Holes per Tap with

HY-PRO TAPS

Your cost per tapped hole is much less when HY-PRO Ground Thread Taps are used. When tapping at high speeds these high production taps will usually produce at least SIX TIMES AS MANY HOLES AS A CUT THREAD TAP! In addition, they require only about one fifth the sharpening for the same number of holes, and are less easily broken.

ORDER THRU YOUR DISTRIBUTOR

Commercial • Precision • Special Ground Thread Taps

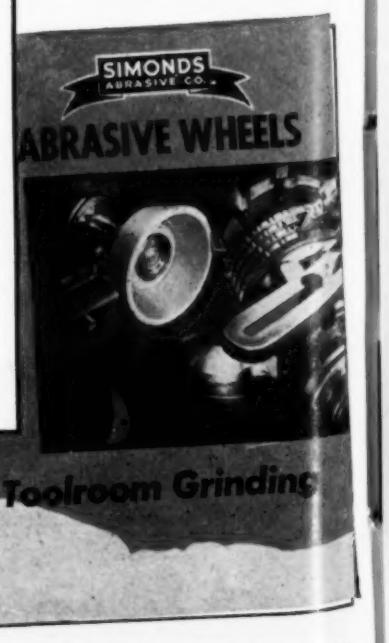
A Subsidiary of Continental Screw Co.

HY-PRO TOOL CO.
New Bedford, Mass., U.S.A.

For more details circle NED-9473 on enclosed inquiry slip

SEND FOR THE FACTS of longer LIFE for TOOLS and CUTTERS

Just off the press, this informative bulletin describes Simonds Abrasive Company Grinding Wheels for sharpening tools and cutters . . . grinding cemented carbide tools . . . surfacing on alloy steels . . . and for other toolroom jobs. Wheel specifications for various grinding operations included.



WRITE NOW for your copy

SIMONDS ABRASIVE CO., 5514 TACONY ST., PHILA. 37, PA.
DISTRIBUTORS IN ALL PRINCIPAL CITIES

For more details circle NED-9474 on enclosed inquiry slip

IN WIRE-MESH PRODUCTS LET JELLIFF DO IT!

For 70 years we've been weaving Wire Mesh. And a good part of that time we have also been making things of Wire Mesh for people who find it is cheaper, easier and generally more satisfactory to "let Jelliff do it."

From big Dipping Baskets to tiny precision filters — from fuel strainers to what-is-it gadgets — JELLIFF's Custom Production Department turns out fabricated Wire-Mesh products at speed, price and precision that mean lower costs and a stronger competitive position for our many customers.

If you buy or make wire-mesh assemblies as components of your own products and have not yet had an estimate from Jelliff, write today for details. No obligation, even if you enclose a blueprint for us to figure on. Address Department 11.

THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS · LEKTROMESH · RESISTANCE WIRE · WIRE MESH PARTS · WIRE CLOTH · STRAINERS • FILTERS
SOUTHPORT CONNECTICUT
WIRE PRODUCTS SINCE 1860

For more details circle NED-9475 on enclosed inquiry slip

HANSEN COUPLINGS

GIVE YOU 2 Big Advantages

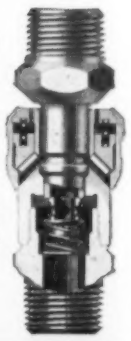
● With Hansen couplings you save precious minutes every time you change air tools — every time you connect or disconnect a fluid line carrying gas, liquid or grease.

To connect, you merely push plug into socket — flow starts instantly. To disconnect, pull back sleeve on socket—coupling disconnects. Flow is shut off instantly and automatically.

Available in a wide range of sizes and types, each type engineered to meet the specific requirements of your particular application.

One-way shut-off, two-way shut-off, and straight-through types.

Write for Catalog



THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

For more details circle NED-9476 on enclosed inquiry slip

For more details circle NED-9477 on enclosed inquiry slip

New Literature—Continued

Hydraulic Control Devices

Hydraulic Equipment Co.—Hydreco gear pumps, control valves, auxiliary valves, cylinder assemblies and pump-valve-tank combinations are described in 4-page bulletin No. 101 which also gives delivery data on pumps, capacity ranges of valves, operating pressures and other vital information.

For more details circle NED-9478 on enclosed inquiry slip

Nonferrous Forgings

Copper & Brass Research Association—"Brass Forgings Make Better Products" is 32-page illustrated handbook that explains development of brass forgings, what they are, and how they are produced.

For more details circle NED-9479 on enclosed inquiry slip

Materials Handling

Towmotor Corp.—Certified job study No. 98 shows how savings in handling wide range of diversified materials from boxcar to storage were realized at Alamo Iron Works, San Antonio, Texas. Fork lift truck and specially designed 'Drive-Through' rack expedited stacking composition roofing material.

For more details circle NED-9480 on enclosed inquiry slip

Insulated Vaults & Safes

Remington Rand Inc.—12-page illustrated booklet SC-679 includes description of construction features of insulated vaults and demonstrates advantages of point-of-use safe equipment.

For more details circle NED-9481 on enclosed inquiry slip

Polyethylene

Bakelite Div., Union Carbide & Carbon Corp.—24-page illustrated booklet form J-545-b reviews characteristics of Bakelite polyethylene which can be molded, extruded or used as coating on paper, cloth or metals. Chemically inert material has low rate of water absorption and remains flexible at low temperatures.

For more details circle NED-9482 on enclosed inquiry slip

Marking Devices

Merkert & Sons—24-page illustrated catalog lists various types of marking devices including steel and brass stamps and dies, machine engravers, burning brands, metal checks and nameplate etchers.

For more details circle NED-9483 on enclosed inquiry slip

Speed Reducers

Cleveland Worm & Gear Co.—36-page illustrated bulletin 130 describes redesigned types AT and RT worm gear speed reducers which feature face type oil seals that require no maintenance. They have higher horsepower ratings than previous models. Complete specifications and application data are included.

For more details circle NED-9484 on enclosed inquiry slip

Soldering Guns

Weller Electric Corp.—Electric soldering guns for every soldering requirement are described in illustrated catalog. Featured is new model gun for light-duty work which has twin focussed spotlights that eliminate shadows in working area.

For more details circle NED-9485 on enclosed inquiry slip

Do it easily—instantly—with fingertip control, while your machines are running!

LOVEJOY
Variable Speed Pulleys

Easily installed with old or new equipment. Simplest speed-change made. Adjust to material conditions, production schedules without loss of time—without labor. Sizes fractional to 8 h.p. Ratios to 3:1 infinitely variable. Low cost. DELIVERIES FROM STOCK.

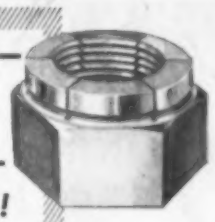
Send for complete catalog. Photos. Diagrams. Data.

LOVEJOY FLEXIBLE COUPLING CO.
Also Mfrs. Lovejoy Flexible Couplings and Lovejoy Universal Joints.
5003 W. LAKE STREET CHICAGO 44, ILLINOIS

For more details circle NED-9486 on enclosed inquiry slip

A fastener AIN'T, *if — it works loose.*

The "FLEXLOC" IS — *because it won't!*



FLEXLOC
ONE-PIECE, ALL-METAL
STOP- and LOCK-NUT

Its "chuck-like," resilient locking segments lock the "FLEXLOC" securely in any position on a threaded member with a controlled, uniform and dependable torque.

Tough applications demonstrate that the "FLEXLOC" positively "won't work loose", yet it can be removed easily with a wrench when desired. Because it is all-metal, temperatures as high as 550°F. hold no terrors for the "FLEXLOC."

The "FLEXLOC" has plenty of tensile . . . can be re-used many times . . . has therefore a long, effective life.

Write for further information and free samples.

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-9487 on enclosed inquiry slip

New! Low-Cost! Wide-Range!
VARIABLE Speed Sheaves
Easily Attached to Any Machine

1/15 TO 15 HP.
RATIOS UP TO 8:1

● Simple, sturdy Speed Selector Sheaves are applied to any machine in only a few minutes . . . giving you wide-range speed control at extremely low cost. You get wide speed variations with standard V-belts, since two variable pitch sheaves are used. Eliminates bulky sliding motor bases, movable jackshafts and wide, high-cost special V-belts.

● Standard V-belts ● Automatic belt alignment
● Fixed shaft centers ● LOW COST

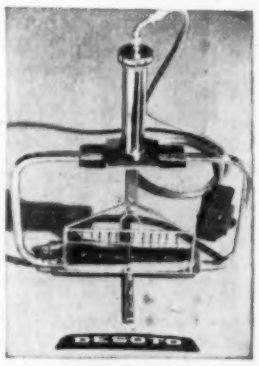
Write FOR FREE BULLETIN
SPEED SELECTOR INC.
118-N NORTH NOBLE COURT • CLEVELAND 13, OHIO

For more details circle NED-9488 on enclosed inquiry slip

CUT SPRAY PAINTING COSTS
SPEED UP PRODUCTION

Often one color after another can be accurately wet painted on many concave, convex or irregularly shaped three dimensional parts. Eliminate makeshift masking devices by using our accurate, snug fitting

ELECTRO-FORMED METAL MASKS
(Made by Patented Process)



Completely tooled units, fixtures and holding devices all air operated.

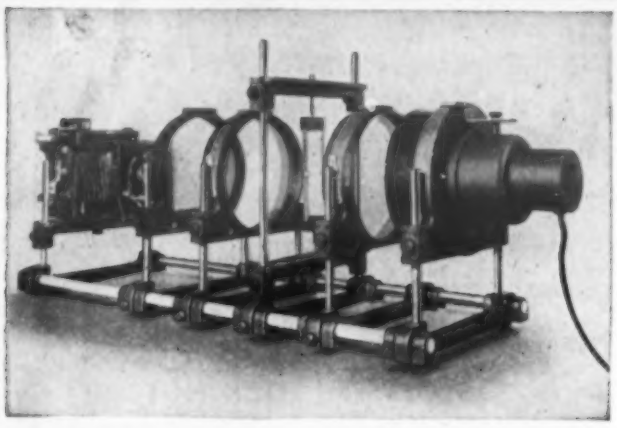
Faster, better, more economical than masking tape. Clean sharply defined letters and decorative effects are obtained on intricately designed die castings, stampings, plastics, etc. Accurate control of painted areas with no fogged edges. Avoids after-wiping or buffing off of overspray.

The "loose" inside of letters and numerals, such as "0" and "6", is held in position by arched bridging to effect perfect characters without objectionable "ties."

Used in production of hundreds of nationally known products.

Send Coupon Today
CONFORMING MATRIX CORPORATION
338 Toledo Factories Bldg. Toledo 2, Ohio
I am interested in metal masking shields. Please send, without obligation:
( ) Further information.
( ) Quotation on masks for parts (or prints) which I am forwarding.
NAME .....
FIRM .....
STREET .....
CITY & STATE .....

For more details circle NED-9489 on enclosed inquiry slip



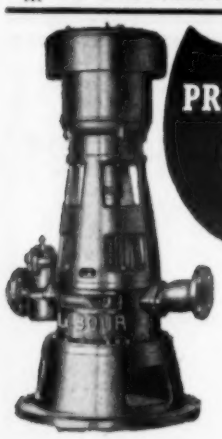
A NEW, Low Cost, Portable POLARISCOPE for Dynamic Stress Analysis

Until now apparatus required for either visual or photographic observation of photoelastic stress, either static or dynamic, has been cumbersome, expensive, excessively bulky and very heavy.

Through use of the G-R STROBOLUME® as a very high-intensity light source for photography, all of these objections have been overcome. Formerly photographic exposures ran into minutes; the bench set-up accordingly has to be carefully designed to minimize vibration in its many parts. The G-R Polariscope consists of an assembly of light rods, supports and disc mounts, this lightness being possible through the extremely short 40-microsecond exposure possible with the STROBOLUME. If you have any problems in stress analysis, investigate this radically new Polariscope.

GENERAL RADIO CO.
Cambridge 39, Massachusetts
NEW YORK CHICAGO LOS ANGELES

For more details circle NED-9490 on enclosed inquiry slip



PRIMING and NON-PRIMING CENTRIFUGAL ACID PUMPS

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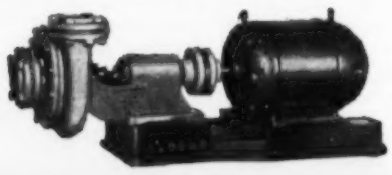

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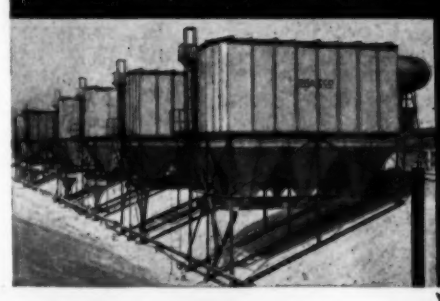

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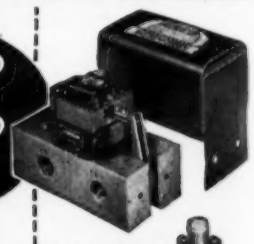

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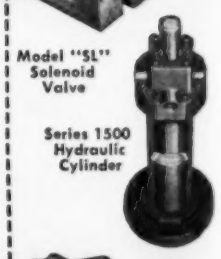

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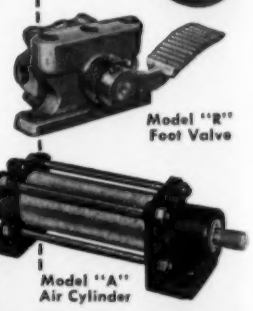

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How BAKER TRUCKS work with new production equipment to provide increased output at lower per-ton cost, is shown by this company with 10 branches, using a total of 12 Baker Trucks. Two Baker 6000-pound Fork Trucks, and a traveling crane, require only about 10 minutes to unload a truckload of 27 aluminum coils, weighing over 40,000 pounds. In another 20 minutes, the Baker Trucks warehouse the entire load.

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Baker INDUSTRIAL TRUCKS

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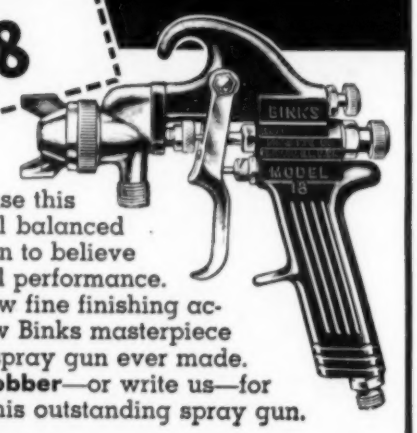
the new BINKS MODEL 18



You have to use this beautiful, well balanced production gun to believe its exceptional performance. Men who know fine finishing acclaim this new Binks masterpiece as the finest spray gun ever made.

Ask your jobber—or write us—for full data on this outstanding spray gun.

Binks MANUFACTURING COMPANY
3122-34 W. Carroll Avenue, Chicago 12, Illinois

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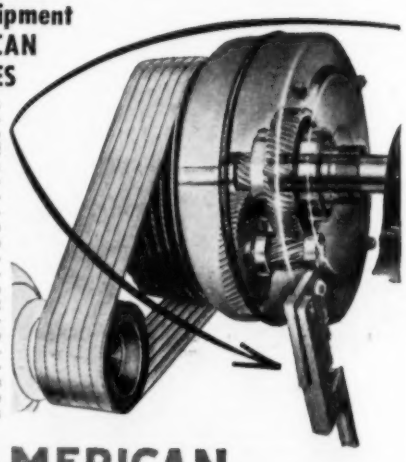
NEW OVERLOAD RELEASE

Provides Instantaneous Protection for Equipment Driven by AMERICAN REDUCTION DRIVES



The American torque-arm Overload Release provides another exclusive advantage for users of American Reduction Drives. It is a simple, foolproof device which automatically and instantaneously disengages the torque-arm from the reduction unit upon sudden shock loads or jamming condition. The Release is easily reset without tools and continues to provide the same overload protection indefinitely. Write for complete information on this simple protective device for use with American Reduction Drives.

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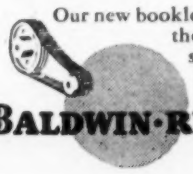

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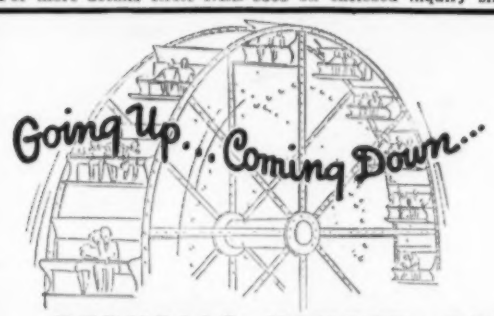

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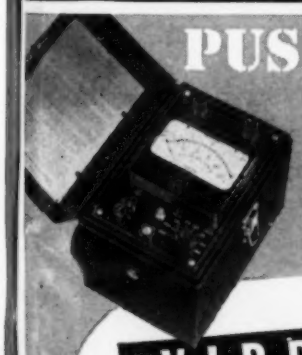

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For more details circle NED-9510 on enclosed inquiry slip

NEW EQUIPMENT DIGEST

NBP CCA

EQUIPMENT · MATERIALS · PROCESSES · DESIGNS · APPLICATIONS · LITERATURE

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For more details circle NED-9511 on enclosed inquiry slip

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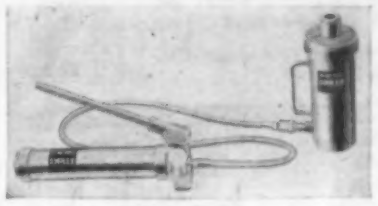
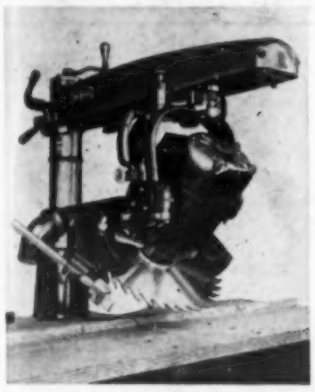
HYDRAULIC RAMS & PUMPS are remotely controlled and portable



Lightweight Re-Mo-Trol remote control hydraulic rams and pumps will operate where limited space or other difficulty makes use of self-contained jacks impossible. Seven models are available, including a telescoping ram, in capacities ranging from 10 to 100 tons. Pumps operate at maximum of 10,000 psi with overload safety protection. Units can lift, pull or push upwards, down, sideways or at angle. On sizes of 30 tons and greater, 'center hole' tubular ram is used to simplify rigging requirements and facilitate pulling. Rod or bolt inserted through ram and secured over ram head can be pulled through ram as it extends. Since pull is always in straight line, little effort is required. Made by **Templeton, Kenly & Co.**, 1010 S. Central Ave., Chicago 44, Ill.

For more details circle NED-9517 on enclosed inquiry slip

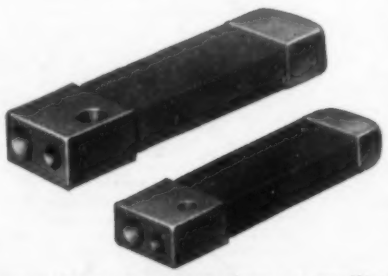
RADIAL ARM POWER SAW has low-dead rise direct drive motor



Available with drive motors ranging from 2 to 3 hp for single-phase alternating or direct current operation or from 3 to 5 hp for polyphase operation, model GR radial arm power saw has decreased distance from bottom of motor casing to saw arbor. This reduction of distance allows feeding of thicker stock when using standard 14-in. saw blade. Motors are of totally-enclosed type for safety and are equipped with sealed-for-life bearings. Machine is available in both standard and medium arm sizes to provide wide range of cross-cut capacities to 4½-in. cutting depth. Made by **DeWalt Inc.**, Dept. P, 201 Martha Ave., Lancaster, Pa.

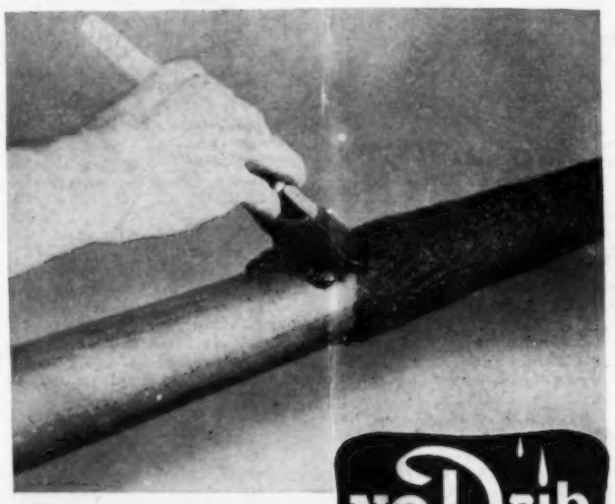
For more details circle NED-9518 on enclosed inquiry slip

RIVET SETS are stocked in five standard sizes



Made of spallproof Mecco safety steel, line of rivet sets includes Wedge Grip type with knurled grip and standard straight shank design. Sizes are available to accommodate 1/8 to 9/32-in. rivets. Hazard to user from mushrooming or spalling is practically eliminated. Made by **M. E. Cunningham Co.**, 151 E. Carson St., Pittsburgh 19, Pa.

For more details circle NED-9519 on enclosed inquiry slip



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See your nearby Van Dorn Distributor for full details on their many quality features. Write for free catalog to: THE VAN DORN ELECTRIC TOOL CO., 762 Joppa Road, Towson 4, Md.

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For more details circle NED-9521 on enclosed inquiry slip

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